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TRADE CAPACITY ASSESSMENT FOR BOSNIA-HERZEGOVINA EXPORTS

FINAL REPORT

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PREFACE

The objective of this Trade Capacity Assessment, which took place from April to June 2007, was to complete an assessment of the export capacity in Bosnia and Herzegovina (BiH) focusing on the agrifood sector—and a limited selection of other promising sectors—and the quality and safety infrastructure associated with export capability. In this context, full attention was given to the country's overall policies and primary institutions for food safety, product safety and quality.

The export capacity of small and medium enterprises (SMEs) in agriculture and food processing, and as a second sector of primary interest, wood and furniture production, were evaluated and considered in relation to the national food and non-food safety and quality systems.

The team has provided a number of recommendations for future assistance both in the above-mentioned sectors and with regard to the national quality and safety infrastructure. At all times, the main perspective of the assessment has been to address the needs and expectations of those SMEs with the potential for and a real interest in exporting to the European Union (EU).
The Trade Assessment team wishes to extend sincere and cordial thanks to our USAID backstopping and supporting officers for their clear guidance, vision and flexibility and to the excellent professionals working with the USAID Linking Markets and Agricultural Products (LAMP) and Cluster Competitiveness Activity (CCA) projects, for their practical support and willingness to share their impressive expertise and thorough familiarity with the sectors under investigation. This exercise has indeed been a challenging and rewarding experience.

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ABBREVIATIONS AND ACRONYMS

AAS	Atomic Absorption Spectroscopy
Acquis	EU Acquis communautaire – total body of community legislation
BAS	National Standards Institute of BiH
BASMP	Bosnia and Herzegovina Institute for Standards, Metrology and Patents
BATA	National Accreditation Body of BiH
BiH	Bosnia and Herzegovina
BIP	Border Inspection Post
BIPM	International Bureau of Weights and Measures
BRC	British Retail Consortium
CA	Competent Authority
CCA	USAID Cluster Competitiveness Activity Project
CD	Commission Decision
CEN	European Committee for Standardization
CIPM	International Committee for Weights and Measures
CNC equipment	Computerized Numerically Controlled equipment
CoM	Council of Ministers
CRL	Community Reference Laboratory
CTO	USAID Cognizant Technical Officer
CVO	Chief of Veterinary Office
EA	European Cooperation for Accreditation
EA MLA	EA Multilateral Agreement
EC	European Communities
EEC	European Economic Community
EFSA	European Food Safety Authority
ELISA	Enzyme Linked Immunosorbent Assay
EMC	Electromagnetic Compatibility
EN	European Standard
EU	European Union
EU ITR	Project on Transposition and Implementation of technical Regulations
EUR.1	Customs certificate
EurepGAP	Euro Retailer Produce Working Group adopting standards of Good Agricultural Practice

FAO	Food and Agriculture Organization of the United Nations
FBO	Food Business Operators
FSA	Food Safety Agency
FVO	Food and Veterinary Office (Dublin)
GC	Gas Chromatography
GDP	Gross Domestic Product
GHP	Good Hygiene Practice
GMO	Genetically Modified Organism
GMP	Good Manufacturing Practice
GTZ	German Agency for Technical Cooperation (Gesellschaft für Technische Zusammenarbeit)
HACCP	Hazard Analysis and Critical Control Points
HPLC	High Performance Liquid Chromatography
IAF	International Accreditation Forum
IEC	International Electrotechnical Committee for Standardization
IFS	International Food Standard
ILAC	International Laboratory Accreditation Cooperation
IMS	Information Management System
IPA	Instrument for Pre-Accession
IPARD	Instrument for Pre-Accession Assistance Rural Development
IPH	Institute of Public Health
IRMM	European Institute for Reference Materials and Measurements
ISO	International Organization for Standardization
ITU	International Telecommunication Union
KM	Convertible BiH Mark (National currency)
LAMP	USAID Linking Agricultural Markets to Producers Project
LIMS	Laboratory Information Management System
LVD	Low Voltage Directive
MIC	Metrology in Chemistry
MoFTER	Ministry of Foreign Trade and Economic Relations
MoH	Ministry of Health
MRL	Maximum Residue Level
MS	Mass spectrometry
NA Directives	New Approach Directives
NDT	Nondestructive testing
NRL	National Reference Laboratory
OIE	World Organization of Animal Health
PCR	Polymerize Chain Reaction

PECA	EU Agreement on Conformity Assessment and Acceptance of Industrial Products with EU candidate members
PPA	Plant Protection Administration
QA	Quality Assurance
QI	Quality Infrastructure
QM	Quality Management
RASFF	Rapid Alert System Food and Feed
SDC	Swiss Agency for Development and Cooperation
SEE	Southeast Europe
SIDA	Swedish International Development Agency
SME	Small and medium enterprises
SOP	Standard Operating Procedure
SVO	State Veterinary Office
TA	Technical Assistance
TC	Technical Committee
TCP	Technical Cooperation Project
TLC	Thin Layer Chromatography
TSE	Transmissible Spongiform Encephalopathy
UN	United Nations
WTO	World Trade Organization
WTO SPS	WTO Agreement on Sanitary and Phytosanitary Measures
WTO TBT	WTO Agreement on Technical Barriers to Trade

1.0 EXECUTIVE SUMMARY

1.1 QUALITY INFRASTRUCTURE

Metrology, of fundamental importance for consumer protection, quality assurance and international recognition of the overall quality infrastructure and its services, is by far the weakest area. There is a dearth of equipment, physical standards, adequate premises and—in selected areas—qualified staff.

The Standards Institute (BAS) has received considerable European Union (EU) support and will be further assisted in the context of upcoming EU projects, but it is still weak. This is mostly due to the BiH private sector's lack of interest and active participation in standardization. Approximation of the system to that of the EU must be achieved by transposition of the relevant New Approach Directives (responsibility of ministries) and adoption of the related coordinated standards. One of BAS' major challenges is applying these standards to allow for their broad implementation in BiH enterprises.

The interest in **accreditation** in BiH is limited to areas in which it is a mandatory requirement (so far only in the oil and oil derivates sector) The national accreditation body (BATA) has not achieved international recognition as yet but expects to become a signatory to the European Cooperation for Accreditation Multilateral Agreement (EA MLA) in 2009 in the area of testing labs. BATA (12 staff members) will probably receive assistance through two projects (funded by the Instrument for Pre-Accession [IPA] and the Swedish International Development Agency [SIDA]), which according to the Institute's management, will completely use up their absorption capacity.

The Market Surveillance Agency is not yet operational. The Agency will not be responsible for the monitoring of food products. Its role in non-food market surveillance will roughly be to build the necessary institutions, finalize secondary legislation, coordinate the surveillance activities by the RS and Federation Inspectorates, and contribute to the collection of relevant data and establishment of effective information systems for market surveillance.

Recommendations

In terms of **assistance**, it is recommended to link interested companies with export potential in the relevant sectors to quality infrastructure institutions, e.g., through **increased private sector participation in technical committees**, and to support the BAS and National Metrology Institute in reaching out to interested parties in the wood and furniture and agrifood sectors.

Finally, **support to the National Metrology Institute** could be an effective measure for the following reasons:

- Without national traceability through adequate metrological services, it will be difficult and expensive for national labs in the non-food sector to obtain internationally recognized accreditation; and
- Without national traceability, the accreditation body will not achieve international recognition.

1.2 FOOD SAFETY

A new body of EU legislation lays down stricter, clearer and more coordinated rules on food hygiene, specific hygiene rules for food of animal origin, and specific rules for control of products of animal origin intended for human consumption. BiH must build up a compliant system so they do not lose the EU market. It is of utmost importance that BiH adopts **risk-based control methods** along the entire food chain, which means

the gradual build up of the same basic structure in official control as the EU. In the near future, requirements concerning the control of foodstuffs will become even stricter.

The new EU food hygiene rules and safety concepts address both government and Food Business Operators (FBOs). FBOs have to implement their own monitoring systems and good practices.

Laboratories for animal and plant health control, and for food control, play an important role in trade. Food safety and veterinary and phytosanitary controls are closely interlinked (e.g., with regard to the provision of information to the service for product certificates). It is the opinion of the expert, as stated in Section 2, that BiH's current food control system is improving, but it still requires a drastic reform—reaching from the policymaking structure to the detailed procedures applied by food testing laboratories and all businesses that handle food. Without significant reform, the proposed changes and upgrade of the laboratory system will have no significant impact on either food safety or the possibility of food exports to the EU. The reform relates to legislation, institution building, inspection, capacity building and laboratories. The reform requires a clear policy and a defined budget for animal/plant health control, laboratories and capacity building. The Food Safety Agency will have a significant role in coordinating food control in BiH.

Only a **few FBOs have export potential** so far (see Annex 4). Where products of animal origin are concerned, BiH does not export to the EU because it is not registered as a third country. Recently, BiH received approval of the residue-monitoring plan submitted to the EU for aquaculture. However, BiH has **no EU-registered processing facilities** as yet, nor can it demonstrate that the required disease control mechanisms are in place. In regard to the export of animal products to the EU, BiH not only has deficits in fulfilling requirements related to slaughterhouses and in providing plant, animal health and welfare and traceability (**animal identification and movement control**), but also with the certifying body at the state level for registering and licensing the facilities. For non-animal products, the requirements for EU imports are getting stricter as well, which has to be considered by BiH in planning the next steps.

Recommendations

The first and primary recommendation is to bring the BiH food control system in line with the EU's to create a basis for export to the EU, particularly in regard to **adopting the Hazard Analysis and Critical Control Point (HACCP) system** as a foundation for the EU's new regulations to control microbial pathogens in food. The new food control system requires a functional institutional framework where competent authorities establish capacities operating under EU rules. Produce must be controlled in accordance with a control plan that takes into account potential risks (EC No 882/2004), which means that a risk analysis process must be in place. It is highly recommended that a **food safety strategy and action plan** be prepared, defining actions and reforms for a modern food control system. In particular, the BiH Food Law needs to be amended and the legal basis for testing at the entity level should be in place, compliant with EU testing requirements.

Second, **capacities for testing residues and environmental contaminants in fruits, berries, vegetables, herbs and teas have to be built up and strengthened**. Even more, building the capacity of the Plant Protection Administration is of the utmost importance since the industry has to meet international standard requirements. Laboratories for pesticide control need to be upgraded. At the same time, producers should be encouraged to operate in accordance with good agricultural and hygiene practices, sector specific hygiene codes and HACCP principles.

Protection of traditional products (herbs, teas) may be one aspect where BiH could enter a niche market, also with Halal certification for the Diaspora.

In short, the next steps the BiH government should take to adapt to a modern food control system as a prerequisite for trade are as follows:

- Align legislation with EU rules and international requirements.
- Agree that food safety is a priority in BiH (political will).

- Advance hazard detection technology; build a greater understanding of food safety risks.
- Adopt EU principles in food testing.
- Apply common standards and testing regime.
- Accredit laboratories.
- Register FBOs, approve or license them.
- Implement good practices and HACCP.
- Develop animal health surveillance and control.
- Develop good practices at the farm level.
- Improve laboratory techniques and competence of staff.
- Develop the Plant Protection Administration.
- Improve coordination between the relevant authorities.

1.3 AGRICULTURAL AND FOOD PRODUCTS

Only a minority of the BiH food processing companies have implemented suitable quality management systems, although it is already a requirement according to the BiH Food Law. Not all exporting companies have quality management systems. Most exporting companies are aware of the need and are planning to install adequate systems in the near future. The more advanced exporters have HACCP systems in place as well as ISO 9000; rarely do they have ISO 14000. The new ISO 22000 standard on food safety management systems—which incorporates ISO 9000, the basics of HACCP and good manufacturing practices—is virtually unknown. Meanwhile, more and more producers of fresh fruits and vegetables are considering EurepGAP certification. This will allow them to expand their exports into the EU. There are producers, such as Agrofruit from Brcko who exported fresh cherries and plums to Austria but were forced to stop because they were not EurepGAP certified.

During the team's company visits the following major obstacles to exports were mentioned:

- Visa requirements and customs procedures,
- Unfair and costly inspection services,
- High costs for inadequate services by domestic laboratories,
- Phytosanitary certificates not in accordance with international rules,
- Passiveness of the BiH State Veterinary Office, and
- Difficulties in finding suitable loans for financing the export business. Special credit lines are missing.

1.4 WOOD AND FURNITURE

There is an evident export potential in the BiH wood processing sector. An increasing number of BiH companies are ready and capable to meet European market demands. A wide range of value-added products is in demand in Balkan and EU country markets. The demand is higher than the production capacity of small-

and medium-sized enterprises (SMEs). Certified supplements for furniture production (boards, foil, finishing material, glue, metal fittings, etc.) are imported and fulfill EU quality standards.

An increasing number of producers have invested in state-of-the-art technology to reach European standards, among them a considerable number without experience in wood processing. BiH wood and furniture producers have a competitive advantage in comparison to other Southeastern European countries because of BiH's favorable geographic location; relatively low labor costs; and the quantity and high quality of beech, oak, walnut and fruit wood.

Existing Bosnian **wood and furniture testing laboratories** do not meet European standards and are currently not internationally recognized and accredited. Products for the Croatian markets must be tested in Croatia and products for EU markets are tested in different labs in Germany, Switzerland, Austria, Italy, Holland and elsewhere.

Most international customers are in direct contact with production companies and provide them with clear product descriptions, drawings and quality-related work orders. In general, samples are sent to the customers to be tested in accredited testing laboratories.

There is a serious lack of coordination among BiH quality infrastructure institutions and there is insufficient participation from wood and furniture producers to implement EU standards.

EU customers do not require ISO 9001: 2000 certification.

Except in new industrial and computerized furniture factories, measures for environmental protection and work safety are quite basic or nonexistent.

Due to the high concentration of international donor activities in the sector, the risk of overlap and duplication is considerable; however, quality issues have not received much attention so far.

Recommendations

As a complementary input from USAID for the wood and furniture sector, the contribution should concentrate on the strengthening and consolidation of BiH quality institutions to increase the active participation of producers in standardization committees and to meet producers' needs relating to the implementation of EU standards. This includes capacity building and training.

The scope and focus of the overall possible future interventions of USAID should be on "linking quality infrastructure to interested companies with export potential".

2.0 ASSESSMENT METHODOLOGY

2.1 SITE VISITS

The trade assessment team carried out a total of three visits to BiH:

2.1.1 Visit 1: March-April 2007

Expatriate consultants included Alex Inklaar as team leader, quality infrastructure expert; Armin Klöckner as an expert on agriculture and food products, and Ralf Rogowski as an expert on legal and institutional issues). The initial visit focus was on briefings of work accomplished and objective and introductions to the project teams; a general overview of public and private sector business development services; selection of priority sectors and subsectors for in-depth assessment; and an assessment of quality infrastructure and related services.

2.1.2 Visit 2: May 2007

The expatriate consultants for this assessment team again included Alex Inklaar and Armin Klöckner, as well as Christine Fröse and Thomas Steinsberger, a food safety and wood and furniture expert, respectively. The focus of this second visit was to conduct in-depth assessments of wood and furniture sector, the agricultural and food products sector, and the food safety laboratories and the food safety system in general. Follow up visits were used to quality infrastructure bodies. The team gained an overview of the metal processing sector (including selected company visits) and met with local consultants.

2.1.3 Mission 3: May-June 2007

The expatriate consultants for this assessment team comprised Alex Inklaar, Christine Fröse, Armin Klöckner, and Thomas Steinsberger. The focus of this last visit was to verify and consolidate findings (meetings with key interlocutors in the relevant sectors and research to fill information gaps), have final meetings with local consultants, prepare the draft final report, and debrief and present key findings and recommendations. The expatriate team was supported by local consultants: 1) Marijo Perc, who focused on preparing a description of the BiH food safety system (legislation and institutional set up) and infrastructure, describing the food safety situation with regard to EU import requirements, and listing relevant donor activities; and 2) Davorin Pavelic, who mapped relevant donor activities in the fields of export promotion and strengthening and upgrading of quality infrastructure services and resources and contributed to the SME export capacity survey in selected priority sectors.

2.2 METHODS AND INSTRUMENTS USED BY THE TRADE ASSESSMENT TEAM

- Structured and open interviews in one-to-one meetings with public and private sector key stakeholders;
- Company visits, assessment of production sites;

- Laboratory visits;
- Trade fair visits, structured interviews with selected exhibitors;
- Structured telephone interviews;
- Evaluation of existing reports and surveys;
- Briefings with USAID and USAID LAMP and CCA staff; and
- Internet research.

The itineraries of the trade assessment team, comprising dates, organizations visited and contact persons are given in **Annex 1**.

3.0 SELECTION OF SECTORS

3.1 CRITERIA FOR SELECTION OF SECTORS

The ultimate selection of sectors for an in-depth assessment was based on the following criteria:

- Medium-to-high export potential,
- Substantial number of SMEs with an interest in exporting to the EU,
- Sector not dominated by a few very large companies,
- Reasonable forecast/perspectives with regard to sustained competitiveness in the medium term,
- (Potential) demand for services by national quality infrastructure institutions, and
- Sufficient room for effective USAID technical assistance interventions.

3.2 SELECTED SECTORS: AGRICULTURE AND FOOD, WOOD AND FURNITURE

Toward the end of the first mission, agreement was achieved with USAID LAMP and the USAID CTO that in-depth assessments of economic sectors would be limited to the **agricultural and food sector** and the **wood and furniture sector**. **Food safety**, a crosscutting discipline, would be assessed via a series of laboratory and on-site visits to be carried out in close collaboration with the national Food Safety Agency (FSA)—in addition to the overall assessment of the food safety system and its legal and institutional set up. The assessment of the national **quality infrastructure, which had been started during the first mission,** would be continued.

3.3 SECTOR NOT SELECTED: METAL AND METAL PROCESSING

UNIS PRETIS Example: The former state-owned company UNIS (Sarajevo Canton), which employed 12,000 people before the war, was split into a number of small companies, that together now employs a total of 2,000 persons. UNIS PRETIS, with 55 employees, produces metal (spare) parts through subcontracts to a few local clients such as the Sarajevo breweries. The company's staff has expertise in manufacturing full-fledged machinery for different production purposes but has not had clients for these products for years. Currently UNIS PRETIS has none of their own products on the market and is not exporting. In the field of machinery production, competition from China and Turkey is so strong that UNIS PRETIS management decided to focus completely on services, i.e., production of machine parts for all potentially interested production sectors. The company is in the process of privatization; the tender has been launched and the process is expected to be complete before the end of 2007. The company is "only surviving" and has not made plans for the future, as "everything will depend on the investor's intentions."

Due to its overall export potential and long-standing tradition in different BiH regions, the **metal and metal processing sector** was chosen for a small series of company visits with the aim of verifying first impressions and gathering information through desk research. Key findings are presented below, which led to the decision not to pursue the metal sector assessment any further:

Many of the very large state-owned companies that were successful before the war were split into a multitude of small companies.

Almost all of these small companies have been privatized but only a few of them seem to have the potential for success in exports (to the EU) or even to survive in the long run due to strong international competition, the lack of decisive competitive advantage and difficult startup conditions after the war.

- Those small companies which have successfully resumed their activity after the war and were able to—at least partially—win back old customers and market shares in the region and the EU do not have any quality or standards-related problems. They have invested in state-of-the-art equipment and can rely on highly qualified workers and engineers. The only quality-related requirement for exports to the EU that they are confronted with is ISO 9001, which they have either implemented or are in the process of doing so.

UNIS UTL Example: The company UNIS UTL, with 30 staff, produces roller bearings for Bulgarian, Serbian and Czech customers who know the company from the days before the war and have confidence in their products. The company has seen a 100% increase in production per year over the last three years. It is now implementing ISO 9001, which is required by the largest manufacturers/customers in the field (such as Schäffler/FAG from Germany) and by all companies related to them. The company's management expects to expand production capacity even more rapidly in the future and states that "our only real problems are related to investment capital."

- Relatively new companies, which were set up during or after the war, seldom have problems meeting customers' requirements, be they EU or others. They are often well managed, fully export oriented, flexible and well linked to their target markets. They invest in certification by foreign certification bodies and have established close relations with foreign testing labs and technology centers. It is doubtful if they would make use of domestic laboratories even if these were upgraded to achieve international accreditation.

- The metal sector is generally of great importance for BiH. However, in terms of production across all subsectors, it is largely dominated by three companies in the low value-added area, namely two aluminum producers and one steel mill.

The largest subsector in terms of production (sales value), by far is the manufacture of basic precious and non-ferrous metals (NACE 274), with a share of 73% in total sales (Table 3). This subsector basically represents the aluminum industry: 99.9% of the sales come from aluminum and only 0.1% is supplied by the lead, zinc and copper industries. The main products sold are aluminum oxide (alumina), non-alloy aluminum in ingots and aluminum alloys in primary form, aluminum alloy bars, rods, profiles etc. and aluminum foils (Agency for Statistics of Bosnia and Herzegovina, Prodcom results 2004).

The iron and steel industry account for about 20% of total metal industry sales. The individual subindustries—the manufacture of iron and steel (NACE 271), the manufacture of tubes (NACE 272) and other first processing of iron and steel (NACE 273, including cold drawing, forming and rolling of steel)—show more or less equal shares of about 7% in total sales each.

It is obvious from the available data, that the metal processing industry production is dispersed in a lot of small companies while the basic metals industry is highly concentrated.

In su-sectors engaged in secondary processing such as casting, forging, pressing, stamping, treatment and coating of metals (NACE 27.5, 28.4, 28.5) the share of small enterprises even reaches 90%. The production of crude steel, by contrast, is mainly in the hands of Mittal Steel Zenica. In the aluminum industry, there is currently only one producer of primary aluminum: Aluminij d.d in Mostar, FBiH and one alumina plant: Birac, in Zvornik, RS.

Excerpts from "The metal processing industry in BiH: a statistical assessment" by the Vienna Institute for International Economic Studies", October 2006

3.4 SECTOR NOT SELECTED: AUTOMOTIVE

The **automotive sector** is not among the sectors chosen, for the following reasons:

- The national quality infrastructure bodies (metrology, standards, conformity assessment, accreditation) do not cater to the automotive sector and have practically no chance to do so in the future. Manufacturers of auto parts rely completely on standards and conformity assessment mechanisms dictated by their clients, which also provide them with the necessary documentation.

- The business success of SMEs that produce auto parts often depends on exclusive relationships with large international clients. This dependency leaves little space for effective and balanced development aid interventions.

- The German Agency for Technical Cooperation (GTZ) has been instrumental in the establishment of the automotive cluster of BiH, which is organized and managed as a private association and offers a broad range of GTZ-sponsored services to the sector. The cluster is well established and its activities (which are perceived almost solely as GTZ activities) are highly accepted.

4.0 QUALITY INFRASTRUCTURE

4.1 ROLE AND IMPORTANCE OF A QUALITY INFRASTRUCTURE

4.1.1 Definition

Quality infrastructure can be defined as the totality of organizations, disciplines, activities and aspects of metrology, standardization, testing, quality management, certification and accreditation that have a bearing on the quality of products, services and systems and personnel and allow for their conformity assessment. A quality infrastructure includes both public and private institutions and the regulatory framework within which they operate.

The services provided by various quality infrastructure institutions help to boost competitiveness and allow production to be based on a division of labor. They are of crucial importance for the establishment of regional markets and the facilitation of international trade and are part of the range of instruments used to avoid or eliminate technical barriers to trade.

4.1.2 Key Elements of an Effective Quality Infrastructure

There is no single recipe or prescription for the organizational set up of a national quality infrastructure. However, the key functions and activities of the sector are defined and described by a rapidly increasing number of international (ISO/IEC) and regional (European) standards. The adoption of these standards as national standards and their actual application in practice no doubt constitutes an excellent starting point for the establishment of a quality infrastructure that will meet the needs of all national and international interested parties and thus pave the way for international recognition of its key elements.

Quality and safety issues food and non-food products are traditionally dealt with by separate specialists in separate organizations. In a similar way, product safety legislation does not cover matters of food safety, product standards are distinct from food standards and the World Trade Organization (WTO) has established different agreements on the avoidance of unnecessary technical barriers to trade for the sanitary and phytosanitary area (SPS Agreement) and non-food commodities (TBT Agreement). The major reasons for the separation of food and non-food-related responsibilities are probably:

- The different risk levels for food and non-food products and thus the different roles of risk assessment, and
- The difference in quality and safety monitoring and control mechanisms.

Whereas food quality and safety control has a well-established tradition of farm-to-fork activities, product safety control still relies – in spite of the increased application of quality management systems – on punctual tests and examinations to a high degree.

4.1.2.1 Metrology

For these reasons, when we speak of quality infrastructure, we seldom include authorities and specialized institutions dealing with food safety issues. For the purposes of this report we will follow traditional practice

and offer separate presentations of non-food quality infrastructure disciplines and institutions (in this chapter) and food safety infrastructure and issues in Chapter 5.

Weights and measures, as starting points for correct measurements in general, are not a natural phenomenon. They have to be defined, described, physically realized in the form of etalons and disseminated. These are the tasks of a national metrology (or measurement) institute. Correct measures – for instance in the fields of temperature, volume, pressure or electricity - are passed on to (industrial) users on a voluntary basis via a network of calibration laboratories. These laboratories will normally undergo a process of accreditation as demonstration of their competence. For the correct dissemination of measures, reference standards, which are used by the laboratories, are compared with the primary standards kept by the national metrology institute and any deviations are documented. These checked reference standards are then used to calibrate working standards that can be applied at the company level to calibrate measuring instruments. By means of this chain of operations measuring instruments are made "traceable" to the national primary standards.

In the field of legal metrology the competent authority – normally the verification service - checks compliance of measuring instruments of all sorts, which are subject to legal control on the basis of metrology laws and regulations. Legal metrology, which is a fundamental consumer protection discipline, also covers the control of pre-packaged goods.

At the supranational level Metrology includes international treaties such as the Meter Convention – which gives authority to the International Committee for Weights and Measures (CIPM) and the International Bureau of Weights and Measures (BIPM) to act on measurement standards of ever-increasing accuracy, range and diversity. There is a need to demonstrate equivalence between national measurement standards. The CIPM Mutual Recognition Arrangement provides governments and other parties with a secure technical foundation for wider agreements related to international trade, commerce and regulatory affairs. It helps to eliminate technical barriers to trade and provide greater confidence in the measurement capabilities of individual countries.

Legal metrology is coordinated by the International Organization of Legal Metrology (OIML). Legal metrology specifications are produced within the OIML and are adopted in all countries.

Standardization is the activity of establishing, with regard to actual or potential problems, **provisions** for common and repeated use, aimed at the achievement of the optimum degree of order in a given context. In particular, the activity consists of the processes of formulating, issuing and implementing **standards**. Important benefits of standardization are improvement of the suitability of products, processes and services for their intended purposes, prevention of barriers to trade and facilitation of technological cooperation. *Definition according to EN 45020: 2006 – Standardization and related activities. General Vocabulary*

Standardization is an instrument for optimization, which was originally developed by and for manufacturers, for the benefit of manufacturers and their clients. Nowadays, standards are used not only by all the economic actors but also by practically all organized groups of civil society as well as the state and its authorities. Standards are agreements between all relevant interest groups, to their own benefit. The establishment of these agreements in technical standardization committees is based on the consensus to be achieved among all participants.

The subjects of standardization are as varied as the user groups of standards: standardization in the context of recognized standardization bodies follows the needs of the interested parties.

Standards set technical specifications for product testing and provide market players with a uniform basis for assessing product quality and for the correct labeling of goods. Standards can be referenced in legislation and this instrument is increasingly used as a tool for more effective "lighter" regulation especially in a harmonization context. (The EU "New Approach to technical regulations and standards" is based on the mechanism of reference to harmonized European standards in harmonized EU product safety directives).

The leading organizations that produce International Standards are ISO, IEC and ITU. The scope of ISO covers standardization in all fields except electrical and electronic engineering, which are the responsibility of the IEC, and telecommunications covered by the ITU. The three organizations have a strong collaboration on standardization in the field of information technology.

Standards can be broadly sub-divided into three categories: product, process and management systems. "Product" refers to the quality and safety of goods or services. "Process" refers to the conditions under which products and services are to be produced, packaged or refined. Management system standards help organizations to manage their operations. They are often used to create a framework within which an organization consistently achieves the requirements set out in product and process standards. The World Trade Organization Agreement on Technical Barriers to Trade (WTO/TBT) recognizes the contribution that international standardization can make in facilitating international trade and practically obliges WTO members to use available International Standards as a basis for national technical regulations and standards - wherever these international standards serve the required purpose and legitimate objectives.

4.1.2.2 Conformity assessment

International Standard ISO/IEC 17000 defines conformity assessment as a "demonstration that specified requirements relating to a product, process, system, person or body are fulfilled." Conformity assessment procedures, such as testing, inspection and certification, offer assurance that products fulfill the requirements specified in regulations and standards. Conformity assessment is specific to the object being assessed – it can be a product, a process or a management system – and to the body undertaking the assessment. For example, it may be the first party, such as the manufacturer of a product, which is making a supplier's declaration of conformity using its own internal testing system *or* a third-party certification or inspection, undertaken by an independent service provider. The service provider could be a government agency or a private company. Each organization must decide which type of conformity assessment is necessary for which purpose. One of the crucial decisions is whether to make conformity assessment mandatory through *government regulations* in specific sectors, or whether to rely on the market to determine in a voluntary manner the conformity assessment requirements within normal transactions between buyers and sellers. This decision should be based on an assessment of the risks involved with a particular product or process, and on an understanding of the impact the associated costs and benefits will have on achieving sustainable development.

4.1.2.3 Accreditation

Accreditation is the "third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks" (ISO/IEC 17000). Establishing accreditation systems based on international standards and guides and linked with membership of the relevant mutual recognition arrangements (EA Multilateral Agreement in Europe, ILAC and/or IAF arrangements at the international level) will help provide assurance to trading partners that suppliers of tests and certificates are competent.

The process of accreditation and the criteria for the assessment of competence of conformity assessment bodies (testing and calibration labs, inspection bodies, certification bodies) are laid down in international standards. Accreditation certificates are not issued for an organization as a whole, but only for a well-defined scope of activities performed by this organization – such as a certain selection of test methods - within its total range of operations. Granted accreditation is time-bound and includes surveillance arrangements between the accreditation body and the accredited body.

4.1.2.4 Market surveillance

In the widest possible sense, market surveillance concerns the control of all products on a market, checking them for compliance with safety requirements stipulated in legislation, **after** they have been placed on that market. Bosnia and Herzegovina has adopted the much narrower EU concept of market surveillance, whose main elements and principles will be briefly described below.

Market surveillance is an essential tool for the enforcement of **New Approach (NA) directives**. NA Directives are the EU's major instrument for harmonization of technical legislation in the field of product safety. They contain no technical details but focus only on the "essential safety and health requirements" concerning the products covered by the respective directive. The technical specifications of the products that match the legal requirements are provided in the form of harmonized European standards. Products, which comply with the relevant harmonized standards may benefit from a "presumption of conformity" with the requirements of the applicable NA Directives as well. All products regulated by NA Directives need to have the CE marking affixed before they are placed on the European market. The ways toward the CE marking can be varied:

- in case of relatively low risk products such as low voltage electrical equipment regulated by the Low Voltage Directive (LVD) any manufacturer who applies the harmonized standards and prepares the required technical documentation to be presented to surveillance authorities may affix the CE Marking on the basis of own test results without the intervention of an independent and recognized third-party testing/ certification body (a "notified body").

- In case of higher risk products the manufacturer will need to choose from more stringent conformity assessment procedures – which often involve the certification of a quality management system - and use the services of a notified body.

Market surveillance needs to function effectively in order to provide uniform application of Community law, equal protection for all citizens and maintenance of a level playing field for enterprises. It involves two main stages:

- National surveillance authorities monitor that products placed on the market comply with the provisions of the applicable national legislation transposing the New Approach Directives; and

- Where necessary, they then take action to establish conformity.

Market surveillance authorities must be vested with powers to take effective action in the case of non-compliances by companies and after detecting dangerous products on their markets. These measures range from a first warning and instructing companies to take voluntary action to product bans and even the destruction and disposal of a dangerous product.

4.2 QUALITY INFRASTRUCTURE POLICY IN BIH

Quality infrastructure building policy and its implementation in BiH are almost exclusively driven by the gradual process of accession to the EU. Soon after the war the existing QI institutions, but first and foremost the National Standards Institute, applied for the inclusion in the regional EU quality infrastructure project PRAQ and applied for national PHARE projects, with the aim of receiving guidance in modeling the institutions after EU organizations, transposing relevant EU technical legislation into national legislation (with a special focus on New Approach Directives) and adopting European standards as national standards. Progress has however been difficult and slow due to recurring entity-related political problems and controversies and the general lack of an "economic single space" in Bosnia and Herzegovina.

QI policy makers in MoFTER are well aware of the problems and the most urgently needed measures for quality infrastructure improvement, which they formulate as follows:

- Increase the capacity of conference assessment bodies (CABs) and reduce the cost of conformity assessment;

- Improve the national system of accreditation;

- As a next step, maybe some similar instrument to the PECAs (EU Agreements on Conformity Assessment and Acceptance of Industrial Products with EU candidate members) can be installed;

- Metrology and testing laboratories must be established or upgraded;

- The organization of conformity assessment at the state level must be improved: Currently, at the entity level, many authorities are nominated for conformity assessment on political grounds, not based on competence criteria; and

- Improve cooperation and coordination between the relevant quality infrastructure institutions. "Independence and separation of QI institutions was translated as **isolation** of these institutions."

The general opinion among QI policy makers after many years of technical assistance is that unless the physical infrastructure for metrology and conformity assessment is drastically upgraded, the transposition of New Approach directives and the (English language) adoption of European standards will not significantly improve the position of (potential) BiH exporters to the EU. However, so far the EU and other donors have been rather reluctant to include these components, which necessarily involve the provision of equipment for metrology and testing labs, into their projects.

4.3 QUALITY INFRASTRUCTURE INSTITUTIONS IN BIH

4.3.1 National Metrology Institute

- The institute is responsible for legal, industrial and scientific metrology and has 31 staff, 15 of them with university education. In the internal rules which were approved by the council of ministers, a maximum of staff of 65 is foreseen.

- The new Metrology Law is harmonized with the relevant EU legislation to a very high degree. The remaining non-harmonized parts concern the distribution of powers over the state and entity levels. The law calls for the accreditation of calibration labs, as a result five labs were (nationally) accredited.

- A fundamental problem of metrology in BiH concerns the establishment of metrology labs for the most important physical quantities. So far the institute only has a laboratory for mass measurements and for reference materials in the field of precious metals. The building of the institute is totally unsuited for these and other labs. A new building must be found or constructed. Moreover, the institute has practically no equipment and no money for equipment. In some cases external laboratory resources can be used for purposes of the national metrology system: Flow and temperature are done by nationally accredited private labs, further resources exist in a state-owned company whose future is said to be highly uncertain however.

- An additional problem in this context is that the BiH accreditation system is not internationally recognized, not even by Croatia and Serbia. For this reason the Metrology Institute is seeking to achieve traceability of measurements through agreements with foreign national metrology institutes, e.g., in flow through the Turkish institute, in other cases through Slovenia.

- Slovenia also supports the institute in its endeavors to get its labs for mass and reference materials internationally accredited, but this support is not yet sufficient.

- The area of metrology in chemistry (MIC - analytical metrology which is of fundamental importance for food safety monitoring among other activities) is covered by 2 employees with a degree in chemistry. More chemists will be hired in 2008. In MIC the Institute has a good working relationship with IRMM,

the European Institute for Reference Materials and Measurements. However, national collaboration with relevant institutions such as the Food Safety Agency still needs to be developed.

- Regional cooperation is looked for and welcomed, but national resources in metrology and testing will always be required, otherwise "we are just a potential dump for inferior products"
- The institute received some support through the EU CARDS Program and the EU PHARE PRAQ 3 project, but only for education/training and not for equipment. Applications have now been filed for IPA projects. "Hopefully there will be at least **some** money for equipment")
- Priorities for the development of metrology in BiH:
  - Adequate premises for the national metrology institute,
  - Establishment of labs to cover at least the main physical quantities,
  - Adequate equipment in priority areas for the metrology labs ("We are not asking for the best, we just want adequate equipment to serve the needs of our domestic industry"),
  - Participation in (sub)regional cooperation and interlaboratory comparisons, and
  - International recognition of certificates.

4.3.2 National Standards Body: BAS

4.3.2.1 General Information

- The former Institute (Metrology, Standards, Intellectual Property Rights [BASMP]) was separated into three institutes due to the need to adapt to EU system requirements. The new Standards Body was formally established in Jan. 2007. BAS has 16 fulltime staff, in accordance with internal rules, which were approved this year, total staff number may be increased up to 52.
- Priority task for BAS: Adoption of EU harmonized standards.
- BAS is responsible for the WTO TBT Enquiry Point, which is not functioning however, mostly because of lack of contact persons for TBT notification issues in the relevant ministries.
- The process of adoption of EU standards is currently completely policy driven and not based on any analysis of sector demand for these standards.
- BAS indicates to have 43 active Technical Committees. In principle the Secretariats to these TCs are inside BAS. Some are external however. The first TCs were established at a time when there was no industrial activity in the relevant sectors.
- BAS management is of the opinion that European standards which are adopted as national standards should really be translated into the national language in order for the user to be able to implement them. However, due to a lack of resources this has so far only happened in 250 cases. In all other cases only titles and brief summaries were translated. To improve upon this situation, BAS is preparing agreements on the purchasing of standards of neighboring standards bodies which have already translated EU standards (into their languages, which can be used for BiH purposes) Nevertheless, BAS needs support for this extensive and expensive translation task.

- Old YUS (mandatory) standards are still in force. In cases where an EU standard on the same subject is adopted, the YUS standard must be withdrawn, however BAS is not competent to do this and the ministries ignore the problem.

- So far only the New Approach Directives for Low Voltage products (LVD) and for machinery have been fully transposed into national legislation. However, only half of the corresponding harmonized standards have been adopted. Next on the agenda are the New Approach Directives on Lifts and EMC.

- There is no pressure from industry to adopt EU standards in specific areas. BAS is currently trying to learn more about the potential (future) demand for these standards with the help of the Foreign Trade Chamber. BAS management confirms that currently nobody in BiH is demanding EU standards from the standards body. Firms that are already exporting to the EU receive the relevant standards from their trading partners or do their own Internet research. According to the experience of BATA management and staff, standards are not required for purposes of the domestic BiH market at all.

- BAS has very recently become a CEN (European Committee for Standardization) Partner Organization and now has the right of Observer in three CEN TCs: 54 - unfired pressure vessels, 127 – Fire safety of buildings, 138 – Non-destructive testing NDT. *(**NOTE:** None of these are related to exportable products).*

4.3.2.2 Standardization activities in the wood and furniture sector

The wood and furniture related standardization activities in the near future will be channeled through a single BAS Technical committee that will join together the members of former TCs 31, 32 and 33. The current list of TC participants includes 15 personal members representing 12 companies, universities and other organizations. Physical committee meetings are organized 2 or 3 times per year. The work program of the joint TC consists mainly of European standards to be adopted as national standards. The great majority of these standards are adopted in English, without translation. 12 terminology standards for the sector were translated however. So far, approximately 350 standards were adopted for the wood and furniture sector.

BAS has great difficulty in mobilizing the interested parties with regard to active participation in standardization work. Probable reasons for this:

- Producers do not see the benefits of participation in standardization work in general, conceive it only as a cost.

- Those producers with a general awareness of the importance of standardization don't feel called upon to participate in the purely formal process of adoption of European standards without any local contribution.

- JUS standards are still widely used by BiH manufacturers.

- BiH producers are not confronted with European standards as such, they mostly take the form of customer requirements presented to them by their EU importers.

- BAS does not sufficiently reach out to their potential customers/ interested parties in the sector. BAS TC secretaries are not sufficiently connected and don't have adequate knowledge of the existing companies, authorities, chambers, associations, technological institutes and similar organizations.

4.3.2.3 Standardization activities in the food sector

Standardization activities in the food sector are dealt with by BAS TC 43, which currently has 17 members, only very few of which are production companies. So far, approx. 215 mostly European food standards were adopted as national standards, without translation.

During a recent meeting TC 43 members met with the Dep. Director of the Food Safety Agency to discuss necessary measures to link secondary legislation on food safety with national food standards.

4.3.3 National Accreditation Body: BATA

- BATA was established in 2001. Before then, accreditation was performed by a department of the national standards body BASMP.
- BATA has a staff of 12 and makes use of a pool of approx. 60 experts and assessors. The accreditation body is active in the fields of testing labs, calibration labs, inspection bodies and certification bodies and is preparing itself for the accreditation of analytical labs in the medical field. In fields where BATA doesn't have its own (lead) assessors or experts, experts from Croatia are hired.
- In May 2007 BATA had accredited 29 bodies: 12 testing labs, 5 calibration labs, 2 certification bodies, 10 inspection bodies.
- Accreditation is mandatory only for inspection bodies and labs in the oil and oil derivates sector. This is the reason for the relatively high number of accredited inspection bodies. BATA would like accreditation to be a mandatory requirement in other sectors as well, however, according to BATA management, the institute is seldom consulted when the relevant laws (such as the new Food Law) are drafted.
- BATA is not yet a member of EA, but signed an agreement in 2005, which allows institute staff and experts to take part in Committee meetings on technical aspects. BATA has also signed initial agreements with Croatia and Serbia and is preparing for mutual recognition.
- Membership of EA and signing the EA Multilateral Agreement (MLA) in the relevant fields is the mid-term goal in order for BiH accreditation certificates to become internationally recognized. In preparation for the MLA application, joint accreditations with advanced bodies should be carried out. According to BATA management the biggest challenge on the way to international recognition is the dramatically bad state of metrology and the lack of traceability in measurements.
- Regional cooperation in accreditation is welcomed by BATA management, but the establishment of a common (sub)regional accreditation body is not deemed feasible.
- BATA is expecting to receive support through IPA (approx. 1 million Euro preparation for MLA (expected 2009)) and will also take part in a SIDA/ SWEDAC project for South-East Europe on the accreditation of food labs, which is expected to be approved by June 2007. Both projects also include training of assessors and lead assessors. If both projects materialize as expected, BATA will have to hire additional staff for the management and implementation of project activities. In this case, according to BATA management **BATA will definitely not be able to absorb any further assistance projects in the next three years.**

4.3.4 Market Surveillance Agency

- The Agency was established in 2006, as foreseen in the Law on Market Surveillance (2004). Currently (May/ June 2007) the Agency's only employees are the Director and a secretary. A total staff number of approximately 30 is foreseen. These persons, including lawyers, will be hired in different phases, following the process of transposition of New Approach Directives into national law.
- As the internal rules of the Agency have not yet been approved by the Council of Ministers the Agency is not yet operational.
- The Agency will not be responsible for the monitoring of food products. It's role in non-food market surveillance will roughly be to build the necessary institutions, finalize secondary legislation, coordinate the surveillance activities by the Inspectorates of the RS and the Federation, contribute to the collection of relevant data and the establishment of effective information systems for market surveillance.

- The Agency was designed for the purpose of enforcement of the new EU type of product safety legislation (New Approach Directives). It does not have a (clear) role to play under they old-type legislation which is still being enforced by the Inspectorates of the Entities and the Ministries.
- Targeted EU support for the area of market surveillance under the upcoming EU IPA projects has been applied for.

5.0 FOOD SAFETY

5.1 GENERAL INTRODUCTION

5.1.1 Rationale

The growing demand worldwide for food safety suggests that improving food safety and expanding international trade can be compatible and even mutually reinforcing goals. An effective and efficient laboratory network for agriculture and food sectors is important not only to safeguard the Southeastern European Union's (EU) border for import from third countries, but also to safeguard food safety for BiH itself, and to stimulate export from agricultural products by an EU compliant control system. Governments and the private sector must quickly react to new food safety crises in order to minimize human illness and financial losses.

OBJECTIVES OF A NATIONAL FOOD CONTROL SYSTEMS

- Protecting public health by reducing the risk of food borne illness.
- Protecting consumers from unsanitary, unwholesome, mislabeled or adulterated food.
- Providing a sound regulatory foundation for domestic and international trade in food.

5.1.1.1 Food safety challenges

Food safety challenges, as well as issues perceived to be food safety concerns cover:

- Microbial pathogens (illness-causing bacteria, viruses, parasites, fungi, and their toxins);
- Pesticide residues;
- Food additives;
- Environmental toxins, such as heavy metals (for example, lead and mercury);
- Persistent organic pollutants (for example, dioxin);
- Unconventional agents, such as prions associated with "mad cow disease" in cattle;
- Zoonotic diseases that can be transmitted through food from animals to humans (i.e. tuberculosis); and
- Foods produced with certain practices, such as irradiation, or animal products produced with growth hormones or antibiotics.

5.1.1.2 Food control system

A food control system covers all food that is produced, processed and marketed within the country, including imported food. They are usually funded by taxes paid by the consumer. Safe food is not negotiable and refers to all hazards that make food injurious to the health of the consumer. Official institutional set-up ensures the quality and safety of the food supply.

Components and priority of **food control system** most typically comprise:

- Food law and regulations;

- Food control management;
- Inspection services;
- Laboratory services; and
- Information, education, communication and training.

5.1.1.3 HACCP

Mainly with the new food law the European Union implements the principle of quality management and process-oriented control throughout the food chain, from the farm to the consumer's table. Spot checks only on the end product would not provide the same level of safety, quality and transparency to the consumer. Regulatory agencies worldwide are increasingly adopting the Hazard Analysis and Critical Control Point (HACCP) system as a foundation for new regulations to control microbial pathogens in food. HACCP is a scientifically based approach to reduce the risk of food borne illness by identifying places and procedures throughout the chain of processes, where contamination is likely to occur, and moreover by eliminating or reducing this risk at source.

5.1.1.4 Regulatory trends

Seven food safety regulatory trends are commonly found in EU and industrialized nations and form the basis of modern food control systems:

(1) Forming one agency to focus on food safety,

(2) Using risk analysis to design regulation,

(3) Recognizing that a farm-to-table approach is often desirable for addressing food safety hazards,

(4) Adopting the HACCP system as a basis for new regulation of microbial pathogens in food,

(5) Adopting more stringent standards for many food safety hazards,

(6) Adding new and more extensive regulation to handle newly identified hazards, and

(7) Improving market performance in food safety through provision of information.

National governments have overall responsibility for the food safety policy. They ensure the allocation of adequate resources, support at highest national level and establishment of integrated control across the food chain including development of food laws and regulations, infrastructure and enforcement.

The food hygiene package of EU regulations introduced in 2004, together with new regulations on official controls in compliance with feed and food law, animal health and phytosanitary measures have implications for laboratory testing programs by all Member States (and third countries). In particular self-control by business operators requires testing at different points of the food chain. The risk-based approach to food safety has also need for more specific tests. The requirements for specific and more detailed testing as well as the introduction of new laboratory techniques (e.g., polymerize chain reaction [PCR] technology) has changed the way diagnosis and associated testing programs are organized. Results have to be comparable; therefore, laboratories apply internationally accepted methods and demonstrate their competence by accreditation.

5.1.1.5 First steps in BiH

BiH has taken first steps adopting regulations governing foodstuffs to EU standards and implementing the institutional framework accordingly. Important milestones have been entering into force of a new food law (reflecting the EU food law) and establishing a Food Safety Agency (FSA) in Mostar. In addition, the veterinary law, which, amongst others, governs the identification of animals, largely corresponds to the

standards of EU. The FSA has been established for organizing the risk analysis process in BiH, serving further as the entry point for the Codex Alimentarius Commission.

5.1.1.6 More aligning to modern food control needed

Aligning to modern food control system in BiH will have more requirements on establishing adequate legislation, inspection, and systems for information, communication, training in order to guarantee health protection along the entire food chain and creating market compatibility.

In addition, the BiH laboratory system needs to be shifted from a socialistic management to market requirements imbedded in a modern food control system. The tremendous shift in the system needs time but will have long-term profit by protecting the health of a population and easing trade if established efficient and competent.

Both the private and public sectors within BiH work to establish good food safety practices. The private sector has strong financial incentives to protect its markets and the reputation of products or industries. Food safety requires not only government action, but also the manufactures responsibility in practicing good hygiene and quality control. Important aspects for the food industry will be registration, categorization and licensing of food business operators (FBO) and support in establishing good practices and HACCP by them.

5.1.2 Selected Topics with Relevance for Export to EU

5.1.2.1 Food of non-animal origin - subject to increased level of controls

In accordance with Regulation (EC) No 882/2004, the Commission may establish a list of food of non-animal origin (including composite products) that, on the basis of known or emerging risks, should be subjected to an increased level of official controls upon introduction into the EU. For such food, the following would apply:

- Particular points of entry shall be designated, and
- Food business operators shall give prior notification of the arrival of the goods and of their nature.

The Commission has not yet established a list of such food. In the meanwhile, the safeguard measures establishing an increased level of control with regard to certain food commodities remain in place.

Pesticides residue analysis. When exporting produce to the EU, the buyer requires that only products approved for use in the country of origin are actually used on the crop. Two separate sets of community legislation are involved. The first is the Commission Decision (CD) 91/414/EEC (1991) on placing plant products on the market. This provides for an evaluation of the active substances that were on the market in 1993. The second set of legislation concerns CD 76/895/EEC from 1976 related to fixing maximum levels for pesticide residues in and on fruits and vegetables, CD 86/362/EEC from 1986 on fixing maximum levels for pesticides in and on cereals, CD 86/363/EEC from 1986 on fixing maximum levels for pesticide residues in and on foodstuffs of animal origin, and CD 90/642/EEC of 1990 on fixing maximum levels for pesticide residues in and on certain products of plant origin, including fruits and vegetables which allow maximum residue levels (MRLs) to be set at European Community level in food of plant and animal origin.

The Community is progressively setting MRLs for each of the 835 substances of plant protection products for each of the approximately 150 commodities on the market. A modern pesticide laboratory is controlling app. 50% of those over 800 active substances. The analytic has requirements for extraction and sample preparation, identification and interpretation. Applied multi-matrix analytic requires well-trained and competent staff, in particular for interpretation of results and handling and maintaining state-of-the-art equipment.

Phytosanitary inspections. Phytosanitary inspections in the EU are governed by the EC Plant Health Directive 2000/29/EC. This Directive lays down the laws by which the Member States must operate their own Plant health service, whereof the key points are as follows:

- Introduction of a single central authority to govern plant health;
- Definition of harmful organism, plants and plant products that should be banned by MS;
- Inspection requirements;
- Rules governing the issue of phytosanitary certificates;
- Issuance of plant passports for certain plants traded within EU;
- Additional declarations on phytosanitary certificates; and
- Inspection of plant material.

5.1.2.2 Industry standards

Industry standards are the common and repeated use of rules, conditions, guidelines or characteristics for products or related processes that are developed and promulgated by an industry for materials and products related to that industry. It is a voluntary, industry-developed document that establishes requirements for products, practices, or operations. International agricultural markets experienced an ongoing liberalization in terms of tariffs and quantitative restrictions within the past years; the significance of sanitary and phytosanitary standards, which can act as an impediment to trade is continuously rising. As required by the private industry a part of these standards, namely food quality and safety standards are expected to have an especially severe impact on agricultural export sectors in developing countries.

EurepGAP. EurepGAP is a private industry standard for good agricultural practices, which is required by a large part of the European market. The major European grocery chains and agricultural suppliers created **EurepGAP** (which stands for "Euro Retailer Produce Working Group which is adopting standards of **G**ood **A**gricultural **P**ractice") as a way to both assure consumers regarding food safety and to protect themselves from any possible problems at farm level in the food supply chain. The key component of the EurepGAP system is a set of production protocols; i.e. farmers must certify that they fit the requirements in order to be able to sell their products to participating supermarket chains. The standard's focus is directed on risk analysis and risk prevention for the purpose of food safety, traceability, workers health and welfare, environmental pollution and conservation management. It covers exclusively the on-farm production and handling facilities. Food processing or even external packing operations are not included in the standard's scope.

At the moment specific standards have been developed for the production of:

- Fresh fruit and vegetables,
- Flowers and ornamentals,
- Crops in general and livestock (covered by a set of standards within the "Integrated Farm Assurance"),
- Salmon (covered within the "Integrated Aquaculture Assurance"), and
- Green Coffee.

Fresh fruit and vegetables are in most demand for standards at the moment. For more information, also on standards (www.eurep.org).

A growing consumer and retailer concern about pesticide residue problems in food made food safety a global issue transcending national borders. A commonly recognized reference standard of Good Agricultural Practices has arisen in order to meet this goal.

Crop protection by the standard means:

- Integrated pest management has to be used.
- Chemicals have to be selected by trained personnel and meet the legal requirements of the country of production as well as the country of destination.
- Application records have to cover many details, such as location, date, product name and active ingredient, pre-harvest interval, etc.
- Application equipment and pesticide storage have to be kept in good condition.
- Awareness about the Maximum Residue Levels in the countries of destination has to be proven and yearly residue testing is compulsory.
- Safe disposal of empty pesticide containers and obsolete pesticides must be assured.

The results at the implementation stage by developing countries show that the implementation of standards causes significant costs but also provides a series of benefits for the producer. In general it can be stated, that private industry standards like EurepGAP can have a serious impact on the sectors, accelerating consolidation tendencies and excluding certain producers which are not able to comply with the standard, due to their specific socio-economic conditions.

Other trade standards may also be important for export, such as the International Food Standard and British Retail Consortium.

International Food Safety standard. In 2002 German retailers developed a common standard for food safety management systems, called **International Food Standard (IFS)**. French food retailers (and wholesalers) joined the IFS Working Group in 2003 and contributed to develop the current 4th version of the standard. The standard has been designed as a uniform tool to ensure food safety and to monitor the quality level of producers of retailer branded food products. The standard can apply for all steps of the processing of foods subsequent to their agricultural production.

The aim of the IFS is to create a consistent evaluation system for all companies supplying retailer branded food products with uniform formulations, uniform audit procedures and mutual acceptance of audits, which will create a high level of transparency throughout the supply chain. The IFS defines requirements in content, procedure and evaluation of audits and a requirement profile for the certification bodies and auditors.

The IFS structure (catalogue of requirements):

- Management of the Quality System;
- Management Responsibility;
- Resource Management;
- Product Realization; and
- Measurements, Analyses, Improvements.

The audit against the IFS standards: Foundation level - these criteria are considered as minimum requirements for the international food industry. Higher level - these criteria are considered as a high standard in the food industry.

British Retail Consortium standard. In 1998, the **British Retail Consortium (BRC)** responded to industry needs and developed the BRC Food Technical Standard. This standard can be used to evaluate manufacturers of retailers own brand food products.

The standard was and still is regarded as the benchmark for best practice in the food industry. Therefore, and due to its use outside the UK it became a Global Standard, which is used not just to assess retailer suppliers, but also as a framework; many companies have based their supplier assessment programs and manufacturing of some branded products upon it.

The majority of UK and Scandinavian retailers will only consider business with suppliers who have gained certification to the appropriate BRC Global Standard. Following the success and widespread acceptance of the Global Standard – Food, the BRC published the first issue of the Packaging Standard in 2002, followed by Consumer Products Standard in August 2003. Each of these standards is regularly reviewed and revised after extensive consultation with a wide range of stakeholders.

BRC and IFS do not differ much in their requirements, and therefore, a joint implementation makes sense. Both systems require HACCP implementation, implementation of a management system for food safety, GMP and furthermore a broad control of procedures, products and personal.

ISO. **The new standard ISO 22000:2005** is based on ISO 9001 and requires a hygiene management and a HACCP system as well as others elements of food safety. Requirements are very detailed thus realization in praxis will be difficult and expensive.

5.1.2.3 Food Microbiology

The EU has introduced new requirements for food safety to be fulfilled by all Member States. A core part is hygiene and microbiological control. Foodstuffs of animal and plant origin may present intrinsic hazards, due to microbiological contamination. Microbiological criteria are tools that can be used in assessing the safety and quality of foods. Due to reasons related to sampling, methodology and uneven distribution of micro-organisms microbiological testing only finished food products is insufficient to guarantee the safety of foodstuff. The safety of the foodstuffs must principally be ensured by a more preventative approach, such as product and process design and the application of Good Hygiene and Manufacturing Practices (GHP, GMP) and the Hazard Analysis Critical Control Point (HACCP) principles.

Buyers will specify strict conditions with respect to

The following rules of thumb apply to microbiological analyses and are dependent on the type and form of procedures under investigation:

- Compliance with general statements may be achieved through the introduction of a mandatory HACCP system to reduce the occurrence of pathogens and microorganisms in fresh, frozen and processed foodstuffs.
- For canned produce implementation of HACCP analysis and preventive procedures must be applied and augmented with finished product testing from time to time. Challenge testing and botulinum testing are requirements.
- For frozen vegetables enumerations methods for total viable count, and Enterobacteriaceae are recommended, the objective being to identify an abnormally high load, and where present, subsequently target individual pathogens for example Salmonella spp., or Listeria spp.
- For proteinaceous food particular emphasis should be placed on E. coli 0157 in the raw product, wit canned produce and frozen vegetables being dealt with according to the recommendations above. An absence of all food pathogens must be demonstrated in frozen foods.
- Microbiological criteria are set for certain bacteria, such as salmonella and listeria, in the main food categories (meat and meat products, fish, milk and dairy products, ready-to-eat foods, fruit and vegetables, etc, see below).

food microbiology testing requirements. Therefore, compliance with these conditions and minimizing the risk at source are essential.

The Community microbiological criteria for foodstuffs have been revised and certain important new criteria have also been set down. The Commission Regulation (EC) No 2073/2005 on microbiological criteria for foodstuffs lays down food safety criteria for certain important food borne bacteria, their toxins and metabolites, such as salmonella, listeria, Enterobacter sakazakii, staphylococcal enterotoxins and histamine in specific foodstuffs. These criteria are applicable to products placed on the market during their entire shelf-life. In addition, the Regulation sets down certain process hygiene criteria to indicate the correct functioning of the production process. The microbiological criteria have been developed in accordance with internationally recognized principles, such as those of Codex Alimentarius

The EU's strategy for setting microbiological criteria for foodstuffs includes the principles for development and application of the criteria, and proposals for measures to be taken. The EC regulation No 882/2004 regulates microbiological sampling and testing of foodstuffs. In order to support the Commission service and the Member States in the management of microbiological risks a network of Community Reference Laboratories has been set up.

Food hygiene package. The White Paper outlined a radical revision of the EU's food hygiene rules and safety concept. Adopted in 2004, the "Hygiene Package" is a streamlined body of legislation that sets down stricter, clearer and more harmonized rules on the hygiene of foodstuffs, specific hygiene rules for food of animal origin, and specific rules for controls on products of animal origin intended for human consumption. General rules are laid down for all food, while specific measures are included for meat and meat products, bivalve mollusks, fishery products, milk and dairy products, eggs and egg products, frogs' legs, snails, animal fats, gelatin and collagen.

The hygiene package **includes the following regulations/directives:**

Hygiene 1: European Parliament and Council Regulation 852/2004 on the hygiene of foodstuffs (corrigendum published in Official Journal L 226) - general requirements primary production, technical requirements, HACCP, registrations/approval of food businesses, national guides to good practice - enters into force on January 1, 2006

Hygiene 2: European Parliament and Council Regulation 853/2004 laying down specific hygiene rules (corrigendum published in Official Journal L 226)- specific hygiene rules for food of animal origin (approval of establishments, health and identification marking, imports, food chain information) - enters into force on January 1, 2006

Hygiene 3: European Parliament and Council Regulation 854/2004 laying down specific rules for the organization of official controls on products of animal origin intended for human consumption (corrigendum published in Official Journal L 226) - detailed rules for the organization of official controls on products of animal origin (methods to verify compliance with Hygiene 1 & 2 and animal by-products regulation 1774/2002) - enters into force on January 1, 2006

Hygiene 4: Council Directive 2002/99/EC laying down health rules governing the production, processing, distribution and importation of products of animal origin - veterinary certification, compliance with EU rules - enters into force on January 1, 2005

Hygiene 5: European Parliament and Council Directive 2004/41/EC repealing 17 existing Directives (corrigendum published in Official Journal L 195) - enters into force on January 1, 2006

The basis of Regulation (EC) 178/2002 and subsequently the so called "hygiene package" is a single hygiene regime covering food and food operators in all sectors, together with effective instruments to manage food safety and any possible food crises, throughout the food chain. The Food "Hygiene Package" is the Regulation on microbiological criteria for foodstuffs, the Regulation on official feed and food controls, and the Feed Hygiene Regulation which constitute a complementary set of rules to tighten and harmonize EU food safety measures. These laws will apply at every point in the food chain.

A key aspect of the new legislation is that all food and feed operators, from farmers and processors to retailers

and caterers, will have primary responsibility to ensure that food put on the EU market meets the required safety standards. Under the food hygiene legislation, the onus is placed on food operators to ensure that food reaching EU consumers is safe. They will have to apply compulsory self-checking programs and follow the Hazard Analysis and Critical Control Point (HACCP) principles in all sectors of the food industry, other than at farm level. The legislation foresees the establishment of guides to good practice, at either EU or national level to assist food operators with the implementation of self-checking programs, and all food operators will have to be registered. Imported products have to meet the same standards as EU goods under the new rules. Certain food establishments must be registered or approved by the competent authorities. Competent authorities should have control systems in place in order to verify with food law in general and with food hygiene in particular.

Microbiological criteria: reducing food-borne diseases. Microbiological criteria are used to measure the safety of foodstuffs based on absence, presence or the number of microorganisms present per unit of mass/volume/area/batch. The new Regulation harmonizes and modernizes EU microbiological criteria for foodstuffs, aiming at increased consumer protection and reduced food-borne illnesses. Microbiological criteria are set for certain bacteria, such as salmonella and listeria, in the main food categories (meat and meat products, fish, milk and dairy products, ready-to-eat foods, fruit and vegetables, etc).

Other pathogens may be added in the future, following evaluations by the European Food Safety Authority (EFSA). Food operators again have primary responsibility to ensure that the criteria are met at a specific point of the food chain determined in the Regulation; national authorities must verify that the rules are complied with. The new microbiological criteria also apply to imported foodstuffs. This Regulation will play an important part in the implementation of the food hygiene Regulations, as the criteria can be used as a yardstick to test whether the good hygiene practices and HACCP principles are being properly applied.

Feed hygiene: added assurance. Many food crises (e.g., dioxins) have started with contaminated feed. Regulation 183/2005 on Feed Hygiene provides rules on the production, transport, storage and handling of animal feed, with a view to ensuring safer feed and thus safer food. Feed businesses have to apply the HACCP self-checking principles, keep records of production and marketing, be registered with the national authorities, and undergo mandatory training. Particularly important is the liability of feed operators to pay for the costs, such as withdrawal from the market and destruction of feed, if something goes wrong with as a result of infringements of EU feed safety legislation. The Regulation covers all types of feed and the entire range of feed business operators. However, there is some flexibility for small businesses and remote regions, for which Member States may put in place appropriate solutions based on the local situation, without compromising the objective of food safety.

As the world's biggest importer and exporter of foodstuffs, the European Union offers advice as well as assistance to third country trading partners. See http://ec.europa.eu/food/international/trade/index_en.htm

- Importing Live Animals and Animal Products into the European Union;
- Approved establishments in Third Countries;
- Protection of Animals during transport;
- List for Rabies Testing Authorized Laboratories;
- List of Approved Assembly Centers in EU and EFTA;
- Useful links;
- Guidance Document - Key questions related to import requirements and the new rules on food hygiene and official food controls;
- EU import conditions for fresh meat and meat products;
- EU import conditions for seafood and other fishery products; and
- Information on the EU regionalization policy.

For detailed information on the new EU hygiene requirement see the full text under www.eur-lex.europa.eu.

New rules for controls on all food and feed production apply from 1 January 2006, both in the EU and in third countries wishing to export to the EU. The Official Food and Feed Controls Regulation sets out harmonized EU control systems, covering both food and feed safety, and

animal health and welfare standards. For national control authorities, the Regulation introduces performance criteria and better definition of tasks. Member States will be required to draw up annual control and contingency plans, which will be evaluated by the Food and Veterinary Office (FVO). The new legislation provides for enforcement measures, including actions for non-compliance with EU food safety rules. Member States will be responsible for laying down rules on sanctions, and also for collecting fees related to official control procedures from operators. With regard to import controls, all third countries should present guarantees that products destined for the EU market follow the necessary standards. Technical assistance and training will be offered to developing country exporters to help them comply with the new rules.

The Hygiene Package and Official Food and Feed Controls Regulation are completed with a series of implementing rules. The main aim in drawing up the implementing measures was to ensure that the new food hygiene rules can be implemented without excessive burden to food operators and businesses.

5.2 THE FOOD CONTROL SYSTEM OF BIH

5.2.1 Current Situation

BiH is remodeling its food control system. The Ministry of Foreign Trade and Economic Relations (MoFTER), the State Veterinary Office (SVO), the Food Safety Agency (FSA), Entity Ministries of Agriculture, Health and Trade are the competent authorities for food safety in BiH (food law/2004). In general, food safety responsibility is shared between the State level and the Entity level authorities including approvals prior to import, food certificates and food laws and regulations.

5.2.1.1 Food safety policy

The food safety policy of BiH is based on laws on Food, Veterinary and Plant Protection at state level in line with the relevant EU legislation (Veterinary Law ("Official Gazette of BiH" 34/02), the Food Law (BiH Official Gazette 50/04) and Law on Plant Health Protection (BiH Official Gazette, 2002). State-level agencies are building up their service in line with EU requirements, transposing the acquis in the form of by-laws stepwise. In general, the Entities are responsible for agricultural and food issues while there is no national level agricultural and health ministry/department.

5.2.1.2 Responsible organizations

The Ministry of Foreign Trade and Economic Relations (MOFTER) is responsible for foreign trade policy. Its administrative organization currently includes a **State Veterinary Office (SVO)** and a **Plant Protection Administration (PPA);** the SVO is responsible for drafting veterinary legislation for the whole BiH, veterinary border inspection, international cooperation and coordination of activities of the entity's authorities, PPA's responsibility is drafting plant health legislation for the whole BiH, international cooperation and coordination of activities of the entity's authorities. The PPA is not yet fully operational due to missing capacities. Plant health border inspection is currently carried out by the Entity's ministries but is envisaged to be a future task of the PPA.

The **Food Safety Agency (FSA)** started its operation in Mostar in late 2006. The FSA is the central agency for risk analysis, handles traceability, recall, emergencies, information to consumers, proposes authorization of laboratories and defines criteria. It shall also be the contact point for activities of the Codex Alimentarius Commission; however a National Codex Committee has not been established yet. The Agency's tasks comprise keeping the register and registration of Novel Food, consumer protection and legislation. The FSA currently falls under the direct responsibility of the Council of Ministers (CoM) of BiH. However, it is recommended to establish the FSA as an executive agency under the future ministry responsible for agriculture at state level, similar to the SVO and the PPA.

The competencies of institutions at State level do not include agriculture or health. Ministries responsible for agriculture, health, and trade and tourism currently exist exclusively at Entity level. Tasks of the ministries responsible for agriculture include veterinary inspection and plant health inspection in their respective territories, while they are currently still responsible for border plant health inspection. Tasks of the ministries responsible for health include sanitary inspection – including border sanitary inspection – while tasks of the ministries responsible for trade and tourism include market inspection (including food quality and labeling) as well as border inspection. BiH has recently enacted legislation, which will integrate inspection activities in all sectors of the economy into one single Entity Inspection body – including veterinary, sanitary, plant health and market surveillance inspection. Finally, departments in charge of agriculture and veterinary issues also exist at Cantonal level, while inspections in the field of food safety are also carried out at Municipal level.

The SVO issues import requirements and import approvals for live animals and animal products, while MoFTER has the responsibility to issue final import permits for seeds, plant material and pesticides, based on the entities phytosanitary department's technical opinion. The SVO border inspectors and the two Entity Ministries of Agriculture phytosanitary inspectors inspect goods at border crossings. The two Entity Ministries of Health have sanitary inspection units responsible for the wholesomeness of imported food. Inspections take place at border crossings or, more commonly, at the customs clearance point. Finally, the Entities' Ministries of Trade Market Inspection units are in charge of quality control for imported foods. They inspect imported food products at the customs point and food in retail distribution.

The CoM of BiH recently approved a new Law on Consumer Protection covering labeling, advertising, ingredients and additives, amongst others. Reportedly, it contains a general provision that the Law on Food shall apply if the Law on Consumer Protection does not regulate the issue.

There are still rulebooks from former Yugoslavia in force stipulating hygiene and other technical requirements for "eating and drinking places". In addition, the Federation of BiH has a Law on Tourism that regulates their classification and licensing (by Cantonal ministries and departments). Inspection of eating and drinking places is the responsibility of the Entity's market surveillance and sanitary inspection bodies. It is to be noted that restaurants and other food service operations are included in the definition of "retail" in the Law on Food as one of the stages in production, processing and distribution and that future regulations or by-laws, i.e. regarding the "hygiene package" and official control, will be applicable in this sector, too.

At Entity level, the Republic of Srpska (RS) recently adopted a Law on the Organic Production of Food. Care should be taken that this Law does not conflict with the Law on Food, i.e. all the provisions of the latter should by definition also be applicable to "organic foods". In addition, once the ministry responsible for agriculture shall be established at State level, it may be opportune to draft a new law on organic agriculture covering the whole of BiH.

The **Law on Food (2004)** is the major piece of legislation regulating food safety and food control in BiH. The Law identifies the FSA together with the SVO and the PPA as well as the relevant ministries at Entity/District level as competent authorities/bodies for risk assessment and risk management (see above). In relation to food and feed safety the FSA plays a key role: in charge of policy issues, drafting regulations, improving food safety, serving as the enquiry point and representing BiH internationally. Although large parts of the former Yugoslav Law on Health Correctness of Food and Products of General Use and of the Law on Health Control of Foodstuffs and General Appliances have been repealed with the introduction of the Law on Food, some provisions related to packaging, irradiation, labeling and advertising, amongst others, are still applied.

Moreover, in 2003, the Government of BiH adopted the Law on the Surveillance of the Quality of Imported and Exported Products. This Law is also applicable to food products and clearly overlaps with the Law on Food, which covers the same ground. Overlaps also exist between the Law on Food and the Veterinary Law with regard to food of animal origin. The latter, as well as the Law on Plant Health Protection will have to be amended to incorporate the new structure, i.e., the proposed ministry responsible for agriculture at State level, which will assume responsibility for veterinary and plant health border control.

As internationally required BiH is at the early stage of the approximation process regarding phytosanitary regulations. Progress has been made in the sectors such as harmful organisms, seeds, propagation materials and pesticide residues by adopting three laws. Secondary legislation has been drafted with the support of an EC funded project but the Plant Health Administration will not be fully operational before more staff is recruited.

5.2.2 Legislation Related to Food Control

The Law provides a good starting point to regulate food safety and food control but it would certainly benefit from a revision. It should be in conformity with Regulation (EC) No. 178/2002 (the EU General Food Law) and various other EC Regulations including the "hygiene package". It is crucial to enforce it and to include the hygiene package in order to support trade to EU.

Moreover the Law is presently administered by the CoM of BiH but it is recommended that the administration of the Law fall under the responsibility of the proposed ministry responsible for agriculture at state level. In addition, several definitions need to be clarified, the Law is repetitive in some instances, its scope and objectives should to be better defined, the rules covering the FSA (mission, tasks, composition etc.) should be improved and gaps in the enforcement provisions be filled.

Sets of laws in BiH

(1) legislation inherited from the former Yugoslavia and applied in each Entity on a different legal basis; most of the texts regulating food safety and quality are applied;

(2) legislation adopted by the Entities within their respective competencies as provided by the Constitution of BiH; however, the legal basis for the adoption of additional regulations by the Entities mostly consists of inherited laws;

(3) legislation adopted at the level of the BiH institutions developed during the last few years in cooperation with the Entities.

A number of overlaps and inconsistencies with existing laws affecting food safety and food control are evident and must be resolved. Additionally, there is a clear need to draft a huge amount of implementing regulations on food and feed. The majority of the regulations (or rulebook) in force originate from the former Yugoslavia and are out-dated. The three important State level laws are not yet fully enforced, lacking by-laws and, in practice thus, can only be partially implemented. Without the appropriate by-laws the above mentioned laws cannot be enforced, nor can those agencies function successfully. Some of the key laws are missing (e.g., the Law on Agriculture). Regarding food regulations, the Entities are applying still their own laws and enforcement mechanisms. Up to now the legislative framework of food safety and food control in BiH is composed of three sets of laws and regulations grouped as follows:

BiH has no food safety strategy and action plan covering also export of foodstuffs. The plan would include a centralized legal plan for approximation of legislation along the entire food chain. A better coordination between CA in drafting legislation would be necessary. The plan should contain harmonization of secondary legislation with a clear indication on withdrawal of old Yugoslav standards and how to implement legislation. The low degree in implementation goes along with a slow pace in establishing new administration and institution, i.e. the PPA. It is important that the FSA takes the step in coordination and planning the legal alignment in BiH with all competent bodies involved in food control.

5.2.3 Institutions

The state-level food and feed institutions are establishing their service in line with EU requirements but their **coordination remains weak**. The establishment of ministries responsible for agriculture and health at State level is increasingly felt necessary for reasons of functionality and efficiency.

A certain degree of centralization would also substantially facilitate future negotiations with the EU and harmonization with EU standards and requirements. A decision on the establishment of a ministry responsible for agriculture at State level by the Council of Ministers (CoM) of BIH and possible amendments to be made to the constitution is recommended. The structure of such a ministry would most likely include the SVO and the PPA, which currently fall under the responsibility of MOFTER. The establishment of a State-level Ministry of Agriculture will ensure that BiH has one competent food authority when negotiations for the EU accession begin. In view of the recently initiated reform of the agricultural sector and finalization of a draft State Law on Agriculture, Food and Rural Development, the establishment of a new Ministry of Agriculture, Food and Rural Development is envisaged for mid 2007. Yet, there is an absence of a BiH Agricultural Strategy and defined medium term priorities while BIH is in preparation for implementation of IPA funds which will have impact in the area of food safety (see under Section 3).

Responsibility for food safety is divided among several agencies with overlapping authority. This situation has led to a disjointed strategy for the protection of human health from food borne disease. An integrated production-to-consumption approach to food safety and enhanced coordination between the CA involved in food safety would be necessary. This approach would significantly increase efficiency, while providing a coordinated strategy for the mitigation of food borne disease. In practice it is known that coordination of clustered and different agencies is difficult to obtain and this is why agencies have to authority for coordination.

In BiH the coordination is hindered by its administrative organization with several CA involved in food control at different levels. In addition, new legislation is not enforced at the various levels and the old legislation not repealed while staffing the new institutions in food safety is too slowly proceeding. In particular there is a low coordination between inspectors under the various inspectorates involved in food control and animal and phytosanitary issues. The SVO office has no authority, right of command and authority to issue directives at entity level; each entity has its own CVO and a different organization of the veterinary service. The organization affects further the laboratory system due to differences between the entities. Under the new food law funding for the laboratory testing is with the state while the old legislation puts the charges on the burden of FBO.

Institutions are far too slowly establishing their service, there has been a nearly standstill in establishing the food safety system and BiH is missing capacities. Since the end of 2006 food safety has gained some importance again by establishing the FSA as a central point for organization of the new systems and consumer protection. The Agency is aligning secondary legislation (translation of EU), conducting a laboratory assessment study and starting several initiatives, such as round table discussions etc. The FSA has elaborated the rulebook for its internal organization and is currently selecting laboratories for official control.

The FSA can only take over its tasks in the risk analysis process if supported by the competent bodies and institutions. The establishment of the process requires a unified control and reporting system (same indicators). The FSA will establish its operation over time but would profit by better coordination of partners, ways of communication etc. It has been already proposed that the FSA should be located in Sarajevo instead of Mostar in order to be close to other state offices. There is no separate export section at the agency so far. Main tasks of the FSA will be the integrated adoption of legislation in the area of food safety.

5.2.4 Inspections

Inspection gives government regular information on conditions in food plants and on farms and ensures that all foods produced, handled, processed, packed, stored, and distributed are in compliance with legislation and regulations. Functions comprise response to non-compliance with food laws, handling consumer complaints, and advising the food sector. The frequency of inspections should be based on the risks posed by different food and the history of problems in a particular sector of the food supply.

The most important problem in BiH related to the institutional framework is the number of administrative levels and public bodies involved in food safety and food control. **There is no chain of command within the veterinary service inflicting on the quality of inspection**. Further overlap and gaps in inspection exist also between the ministries of health and agriculture at entities level. In order to establish an efficient and uniform food control solution would be to establish one single inspection system covering all BiH with only a limited number of regional executive offices.

It would, however, imply the transfer of not only all legislative competencies but also all executive functions to the State level and, therefore, a **long-term** solution should be considered.

For the shorter term, one solution is to concentrate the responsibility for food safety, veterinary and plant health administration at State and Entity/District Brcko level (two-level model). Under this structure, inspection staff, apart from border veterinary and plant health inspectors at State level, should be transferred to either the planned Entity/District Inspection bodies or (as long as they are not set up) to the various relevant ministries at Entity/District level. At the same time, it should be under consideration to decrease the responsibilities of Cantonal and Municipal authorities with regard to food safety, veterinary and plant health inspection.

The following needs have been identified:

- Inspection has to be further aligned to EU requirements by adoption of the hygiene package.
- The scope of inspection has to be defined (per inspectorate).
- Unify inspection: reform on the inspection system; transparent inspection, no multitasking.
- Implement HACCP system (in a strategic approach) and enforce it.
- Train government responsible in inspection and HACCP auditing technique.

Furthermore, as mentioned above, duplications in inspection activities at Entity level should be resolved within the planned Entity/District Inspection bodies or (as long as they are not set up) through coordination of the relevant ministries at Entity level, in particular the ministries responsible for health (sanitary inspection) and for trade and tourism (market surveillance inspection).

5.2.5 Information, Education, Communication, Training

There has been no training on new requirements in food safety in BiH and requirements for export to EU for a long time; this refers to training for laboratory staff and inspectors as well as for industry. There are no training plans at institutional level. Therefore, government regulators are not well informed on new EU requirements on food safety and trade. There are only some laboratories testing in accordance to new EU requirements such as the Agricultural Institute of RS for qualitative analysis of GMO. The tests are conducted upon request by exporters only. Other laboratories do not adapt to new EU testing requirements.

In general, information, education and training on quality management, quality assurance, risk analysis and the HACCP system is insufficient and should be enhanced in BiH.

There is need to train government regulators on new EU legislation, maximum residue limits (MRL), quality management (QM) and quality assurance systems (QAS). Selected personnel in BiH operating within food control and laboratories should be trained in electronic data management system (intra net), data transfer and data storage. It is necessary to train personnel from National Reference Laboratories (NRL) and the FSA in modern Information Management Systems in order for them to plan and develop an Information Management System (IMS) and Laboratory Information Management System (LIMS) for reporting and retrieving information long term. The FSA along with the competent authorities should address capacity building and training needs by their business plans. Trainings in the area of food safety and information on new requirements are provided by EU initiatives, such as "Better Training and Safer Food" and by FAO in i.e. risk assessment. There should be one agency coordinating for trainings in the sector. Trainings for

analytical purposes should be addressed by training plans (quality manager of laboratories within official control). For laboratory staff a separate training plan has to be developed by FSA and partners, i.e. for EU requirements, multi-residues methods etc.

5.2.6 Export to EU

BiH has been unable to comply with EU requirements for third countries for a long time, thus being unable to export food of animal origin to the EU. [1]

BiH has not been approved as third country for export of products of animal origin yet. This refers in particular to the Directive 96/23/EC on measures to monitor certain substances and residues thereof in live animals and animal products (National Residue Monitoring Plan). The Directive establishes that Member States should draft a national residue monitoring plan for the groups of substances detailed in Annex I. These plans must comply with the sampling rules of the Directive. Directive 96/23/EC establishes the frequencies and level of sampling and the groups of substances to be controlled for each food commodity. Commission Decision 97/747/EC provide further rules for certain animal products: milk, eggs, honey, rabbits and game meat.

Two years ago the State Veterinary Office of BiH started to work on the annual plan to create the basis for export of BiH animal products to EU. The plan has not been approved by the EU. Reportedly, amongst other issues comments were on MRL which are not equivalent to EU MRL. Hormones are still allowed by BiH meat industry. In addition, in order to improve the plan, some testing witch could not be conducted in the country, is tested by a contracted laboratory in Slovenia as of now.

Since the MRL in BiH differ from EU requirement, BIH is currently harmonizing its legislation regulating MRL. A draft has been prepared by the Food Safety Agency and will be discussed with the head of the SVO. *BiH needs equipment for confirmation of results, in order to fulfill the monitoring. Further, the legal framework has to be adopted; a functional veterinary service is required to observe animal health. For export of pork meat the country has to be free of classical swine fever. Animal health problems in the country are with brucellosis and classical swine fewer at the moment. A prerequisite for approving FBO for export is to have HACCP in place. Under the Twinning project supporting the SVO some training is provided for meat industry while the SVO is discussion some supporting measures for introducing HACCP.*

Just recently, in February 2007, the residue monitoring plan submitted by BiH for aquaculture has been approved by the EU[2]. At present BiH would like to export fish and FP from freshwater aquaculture production. Two establishments have applied to export to EU fish and/or FP.

BiH applied for export of wild game, poultry meat and honey to EU this year as well. The plans are not approved so far. But it is expected that the approval will be given for wild game and poultry also. The SVO sees potential for export of cheese to EU further.

In order to export products of non-animal origin to EU, the plant health system in BiH has to be in place. Plant health certificates are issued based on diagnostic carried out by laboratories. In order to establish the system in line with EU, secondary legislation has to be in place and laboratories have to be upgraded in terms of equipment, methods and education of staff. Problems are seen with responsibilities of laboratories under the current system. The main pesticide laboratory is under the IPH. The process in establishing the PPA in

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[1] Food of animal origin includes meat, including fresh meat, meat products, minced meat, meat preparations, poultry meat, rabbit, farmed game meat and wild game meat, eggs and egg products, fish and fishery products, milk and milk products, honey, gelatine and gelatine products.

[2] See CD of 12 February 2007 amending decision 2004/432/EC on the approval of residue monitoring plans submitted by third countries in accordance to Council Directive 96/23/EC which gives authorization to export aquaculture products to EU.

accordance to international requirements is proceeding far too slow and should be addressed politically in order to have quicker results.[3]

Aside from the constraints resulting from the lack of an EU-compliant quality assurance infrastructure, the ability of the BiH private sector to meet EU standards also needs to be further developed. Currently only a few companies are able to manufacture products that meet the EU standards on quality; - regardless of programs for upgrading food processing establishments to meet EU standards and efforts of reinforcement and control measures related to the new hygiene requirements by EU and the awareness of operators on new requirements.- **An absence of Hazard Analysis and Critical Control Point (HACCP) measures** in place was identified as a major obstacle for approval of fishery products export to the EU by the Food and Veterinary Office (FVO).

During the assessment it became evident that establishments are not categorized yet and that a strategic plan of how to upgrade facilities by government should be in place.

GMP and HACCP are not mandatory yet, thus inspectors are not trained in HACCP audits.

Control of the fish health status is not mandatory. Therefore some of the fish farmers have signed voluntary contracts with inspectors for controlling their fish health status.

For the non-animal products sector, fruits, vegetables, herbs and teas implementation and application of GAP would serve to enhance the quality of the products for export.

5.2.7 Conclusions and Recommendations

5.2.7.1 Weaknesses

- Fragmented legislation, duplication of regulatory activity and lack in coordination;
- Weakness in surveillance, monitoring and enforcement;
- Weak infrastructure of food control laboratories;
- Lack of awareness on food safety issues by both society and decision makers;
- No updated food standards, lack to harmonize food legislation with international requirements; and
- Lack of government commitment to support food industries to operate on Good Hygiene Practice, sector specific hygiene codes and according to HACCP principles.

5.2.7.2 Requirements in order to improve export of animals and animal products into the EU

- Enhancing performance of core administrative tasks, coordination and inspectorial veterinary service;
- Establishment and enforcement of MRL for veterinary medicine and environmental contaminants; observation of withdrawn periods and introduction of good practices at farm level;
- Adoption of methods which are currently being carried out in Slovenia;
- Inspectors are competent in HACCP auditing;

[3] Components under requirements for export of products of non-animal origin will be supported by IPARD and World Bank projects in future (see under Section 3). Support to the PPA is foreseen in 2008. LAMP carried out an assessment in 2004 on the current status of phytosanitary issues in BIH and proposed future developments. The findings are still valid and relate to legislative and institutional support.

- Laboratories are using confirmatory methods and are accredited;
- SVO is competent in interpretation of result and application of measures;
- Risk based testing is applied;
- Animal health is controlled (i.e., Tuberculosis, Brucellosis, classical swine fever etc.);
- Registration of FBO, licensing, coordination with FSA, categorization of veterinary establishments;
- Training needs in the area of welfare at slaughter and transport, and HACCP training (Taiex recommendations from 2005 on Taiex advisory visits to the Western Balkans countries concerning animal health, animal welfare, zootechnics, veterinary public health – informatics questions and trade with the community and import controls);
- Meat FBO should become more responsible for carrying out operational prerequisites, and start hazard identification and risk analysis (in initially in partnership with officials);
- Transpose the EU Directive on animal welfare into national legislation;
- Trainings provided for both officials and the operators in the application of the new Hygiene Legislation, training in animal welfare;
- Legislative alignment and enforcement at entity level;
- Animal identification and movement control in place and operational; and
- Control of feed.

Fur further information on the institutional set-up reference is given to the report of the national food safety expert in Annex 9.

5.3 ASSESSMENT OF LABORATORIES IN OFFICIAL CONTROL

5.3.1 Laboratories system in EU

Laboratories conduct testing of national food production, import and exports and are an impartial part of modern food control systems. Controls, monitoring and information exchange make foodstuff even safer.

Laboratories in modern food control have new testing requirements, i.e. since new industrial techniques have impact on food, food packing also the testing requirements have changed. Today instead of analytic reference, EU laboratories put effort on microbiological testing and screening with rising significance for NMR (nuclear magnetic resonance) technique and chemometric analysis. They further adapt and transfer more flexible new insights from research and development into routine analysis. In a summary, faster screening methods, automation, new data processing and result evaluation is mandatory for any economic and efficient food analysis today. Then also some laboratories in the network of official control have to react quickly during outbreaks; others should be able controlling new emerging pathogens. Thus staff of laboratories in modern food control has to be well and continuously trained and there should be sufficient laboratory capacities within 24 h operating time.

Laboratory testing is essential for export. In general in the light of global trade testing becomes more sophisticated requiring investments by both staff and equipment while results have to be comparable.

The EU food control system is based on three levels of inspection and sampling:

- Monitoring programs to detect any problems of environmental contamination or incorrect use of veterinary medicines, pesticides or food additives. These are national programs mainly intended to identify problems at the level of the country, region or sector of the industry rather than individual processing plants or food consignments. Food monitoring of residues (pesticides, heavy metals, organic and inorganic substances in and on foodstuffs which are at risk for consumers) is essential for having representative data of the existence of such substances within a country. Important in terms of compatibility of results is to have sampling and methods/analysis in accordance to normative procedures. Food monitoring has objectives in evaluation of risks, showing trends in the contamination of food. Ii should proof evident in what amount the consumer is exposed and delivers a data basis on which the Government takes action.
- Self-control by producers, processors, transporters, traders and caterers, whereby they are responsible for controlling the quality of their own products and for complying with national law, and where the role of inspectors is just to check that the self-control systems are being implemented correctly
- Verification of finished products, as a final check to make sure that the whole system is working well and to check whether any problems of spoilage or contamination are occurring after food leaves the processing plant.

EU has introduced a system and network of reference laboratories in order to support the competence of laboratories within official control. There are NRL (National Reference Laboratories (NRL) and EU Community Reference Laboratories (CRL). NRL are in charge of coordinating and supporting official control laboratories. Tasks of NRL comprise development of standards for validation, quality assurance, optimization or development of methods, advice on legislative alignment, they further produce reference material, provide support to official laboratories in analytical methods, organization of comparative tests, training of staff and international cooperation.

For EU laboratories working in the area of residues for animals in official control it is mandatory to be part of an internationally accepted quality assurance and accreditation system. These laboratories have to take part in proficiency tests underpinning unified standards in the area. Proficiency tests are organized by the CRL.

There is no requirement for third countries to have reference laboratories. However, Regulation (EC) No 882/2004 requires laboratories engaged in verifying compliance with EU food standards to be accredited. Such laboratories may be private laboratories that have been designated for the purpose of verifying compliance with EU food standards by the body in charge of official controls.

In order to facilitate the accreditation of laboratories, the Commission has adopted a Regulation that grants **a transitional period of four years** during which laboratories in third countries can adapt to the new situation.

Trends in the laboratory system for official control in EU are:

- Laboratory network, electronically connected, centralize data for risk assessment, recall and crisis management
- Underpinning the risk analysis process
- Coordinated by a central agency responsible for food safety; transfer of data from official control to central level; NRL attached to agencies and NRL linked to EU reference laboratories
- Accreditation; use of international standards; practice of management systems
- Participate in proficiency testing, use of validated methods
- Screening and confirmation; microbiological testing
- Well trained staff and continuously education of staff
- LIMS and other information management systems
- Cost efficiency
- Data for multi annual monitoring control plan.

Third countries or potential third countries should take part already in proficiency tests.

Laboratories as part of the official control for testing of foodstuffs and animal health should be independent and the operations should be transparent and competent, since testing is the scientific proof of any hazard.

5.3.2 Methodology and Cooperation with FSA

In order to export to the EU market, BiH needs proper laboratories and certification bodies. There is an urgent need for upgrading BiH's legal and institutional framework related to standardization, conformity assessment and accreditation to facilitate greater exports. At present, reportedly four food and feed testing laboratory are accredited by the Bosnian Accreditation Body (BATA) according to internationally recognized accreditation standards.

The Food Safety Agency is aware of the fact and has selected 40 laboratories (private and state owned) so far within and outside the official control for evaluation on their potential to be part of a laboratory network of BiH in future (see Annex 2).

During the mission from May 7-10, 2007, the head of the department of collaboration and laboratory development of the FSA and the consultant visited 12 laboratories in both entities and District Brcko and at national level in order to have a representative sample of all the main services and agencies.

Reports of other projects conducting or having conducted laboratory assessments:

The team visited laboratories under Ministries of Health and Agriculture at entity level and private laboratories at national level (see Annex 1). The FSA did the planning for the visits. During the visits no in-depth assessment was possible. Two aspects were covered by the assessment basically:

- Laboratories in their capacity testing for import to EU, serving to industries needs, and
- Support to FSA in selecting appropriate laboratories for the network in official control.

Most of the laboratories have been visited 2-4 hours. The analysis of laboratories comprised round tours, interviews and discussion on further needs. If made available, findings by other assessment were considered by the assessment team.

- EU under preparation for IPARD fund - draft report made available;
- World bank – assessment reports on residues in plant protection products, general information on placing on the market plant protection products seeds, propagating material, national listing and plant variety rights (all from 2005) with some reference given to laboratories;
- EU ITR project (Technical Assistance for the Transposition and Implementation of Technical Regulations in BiH) - reports are not made available on 15 BiH laboratories assessed from June - October 2006) and proposals for upgrading the selected laboratories from November - February 2007 presented to the FSA and the Association of Conformity Assessment Bodies within the Foreign Trade Chamber (February/March 2007);
- EU twinning Veterinary Service – Laboratory report at their website www.vet.gov.ba/twinning-proj;
- GTZ report on veterinary laboratories from 2004 – draft available;
- FVO mission from 2005 " Final report of a mission carried out in Bosnia-Herzegovina from 29 August to 2 September 2005 in order to evaluate the public health and animal health controls and the conditions of production of Fishery products, live fish, their eggs and gametes destined fro export to the EU (see FVO Web site); and
- Taiex mission on the veterinary service (report and questionnaire obtained, but no cover page indicating date of the mission).

Most of the assessments conducted so far focused on veterinary laboratories and chemical analysis. So far no in-depth assessments of laboratories under the phytosanitary service have been conducted while some information is made available on laboratories in the sector.[4]

5.3.3 Laboratory Organization under the New Food Law and Activities by the Food Safety Agency

The FSA organized a two-day workshop at the beginning of the year where all head of laboratories in BiH were invited. Topics were on explaining EU requirements, on accreditation, and their assessment. It is the first time that data on the organization, management and testing of laboratories in BiH are systematically collected. The FSA's department on collaboration and laboratory development (under the risk assessment department) will summarize their findings on laboratories, methods, amount of samples etc. The assessments will serve for selecting laboratories within official control. The selection mission is anticipated to be at the end of the year. Indicators for selection of laboratories are in discussion. The unit will summarize number of laboratories, list of equipment, level of education and professional orientation of personal, type and method of analysis, number of analyses and results.

It is only recently, that the **FSA has started a laboratory assessment** in order to select and propose to the Council of Minister (CoM) laboratories designated for official control under the new food law approach.

The aim of the FSA is that the laboratories' work in the near future will be based on the new EU hygiene rules (Regulation 882, 852, 853, 854/04) and in accordance to methods in compliance with Codex Alimentarius. There should be a network of testing and reference laboratories in future. The laboratories will be financed by a state budget, thus the capacities have to be calculated on the basis of the available budget line. The Agency will also propose a) procedures of assessment and b) procedures for authorization of testing laboratories.

In Article 38-40 of the food law provisions for authorizing testing and reference laboratories for BiH are laid down:

- Laboratories analyzing samples for the purpose of official food control have to be authorized by the CoM upon the Agency's proposal in cooperation with the competent bodies.
- There will be a list of testing laboratories, types of laboratories and analysis they are authorized to perform.
- The authorized testing laboratories have to work in accordance to the Food Law and have to prove their competence.
- Laboratories authorized to perform specialized analysis and to issue international certificates have to be accredited by an independent institution. The procedure of assessment and authorization of testing laboratories is laid down by the CoM upon the Agency's proposal and with prior opinion of the Institute for Accreditation of BiH.
- There are also labs within the network carrying in out basic tests.

5.3.3.1 Reference laboratories

For any analysis conducted with the view of examining the official food health correctness and quality control, the CoM acting on the proposal of the Agency authorizes a reference laboratory for certain kinds of analyses. The reference laboratory shall comply with the requirements laid down in applicable norms and shall be accredited by an independent institution. They will:

[4] For example by the Project on Restructuring the MAF in BiH, Inception report – Phytosanitary Control. For further reading reference is given to the LAMP report on "Current status of phytosanitary issues in BIH and proposed future developments (December 2004, 2nd draft). The main findings of the reports are included by this report.

1. Advise the Agency and the competent bodies, depending on the competencies in authorizing laboratories, qualified to conduct analysis for the purpose of the official control.
2. Coordinate and support, including training and other services, the activities of the laboratories related to technical standards and methodologies of the analyses they perform.
3. Organize national and international comparative testing of standardized samples and participate in them in order to keep abreast of the competence of testing laboratories.
4. Ensure that laboratories apply internal quality assurance system (including evaluation of a method, record keeping, storing of reagents, safety and routine calibration of equipment).

For the following tests the FSA is planning capacities, which are in compliance with EU requirements:

- Microbiology (Classical techniques, API® method of bacterial identification, Detection of bacterial enterotoxins, Identification of bacteria and toxins by Polymerize chain reaction method [PCR]);
- Determination of residues and contaminants presence in food (Biological residues (hormones, antibiotics, sulfonamides etc.) - Screening methods (HPLC, Enzyme Linked Immunosorbent Assay-ELISA), Determination of pesticides (Gas Chromatography method), Heavy metals (Atomic Absorption Spectroscopy - AAS method), Mycotoxins (ELISA - Enzyme Linked Immunosorbent Assay, TLC – Thin Layer Chromatography);
- Level of radioactivity - Gamma spectrometry;
- Testing for origin of meat (ELISA);
- GMO food; and
- Food quality, composition of food (physical, chemical analysis) (water content, dry matter content, pH, macro and micro elements, nitrate content etc.).

(The list has been presented at the laboratory seminar by the FSA's laboratory unit; Remark: Capacities for testing for material in contact with food is recommended to be developed as well).

A list of reference laboratories and types of analyses for which they are authorized as reference laboratories will be published in the Official Gazettes of BiH and the Entities and Brcko District. The cost of running reference laboratories and others for performing activities shall be borne by the competent bodies. If food does not comply with requirements prescribed by law FBO pay for the service.

5.3.4 Overview of the Current Situation of Laboratories in BiH

This section contains an overview of the findings during the assessment period of laboratories between May 2 -12 2007. See also Annex 4 for more details.

The BiH food laboratories and their organizational set-up are clearly affected a long-lasting isolation from developments in other countries. The reorganization of the laboratories to a food chain network in BiH with its alignment to present international norms implies large changes of the existing organization and of the individual institutes and laboratories.

So far there is **only one accredited laboratory** under the veterinary laboratories (Veterinary laboratory of Cantonal Veterinary Station Sarajevo) operating **in compliance with ISO 17025**, which has a carpet in the microbiological section.[5] Some of the visited laboratories are attempting to obtain accreditation while others have no possibility of accreditation without considerable investment. Metrology is a major problem in BiH, testing equipment cannot be traced back. None of the laboratories in BiH takes part in proficiency tests.

[5] The assessment of the FSA gives a figure of four accredited food testing laboratories according to BAS/EN/ISO 17025/2005 (BATA). The accreditation is given by the national accreditation body BATA.

Based on BIH law laboratories testing for official control have to be accredited until end of 2006, which is not enforced, or following a systematic planning.

Standards between laboratories are extremely variable. Some laboratories have been well renovated and equipped as laboratories in Europe. i.e. the laboratory for quantitative analysis of GMO at the Agricultural Institute in RS, the industry laboratory Pharmamed in Travnik or sub-department for public health, chemical laboratory at the Institute of Public Health (IPH) Distinct Brcko. Others are severely below standard. Some renovations and refurbishments of laboratories took place over the years and new laboratory equipment has been delivered by several donors. Nevertheless there are some laboratories not very well equipped. Several laboratories visited so far mentioned to be in renovation process or to shift their activities to new and better facilities. The Veterinary Faculty of Sarajevo is planning for a laboratory complex outside of Sarajevo.

Whilst none of the laboratories are specialized for a specific area, all of the laboratories want to be involved in most testing. Many of the visited laboratories mentioned to require a GC or HPLC for testing for pesticides or heavy metals in future. Considering the size of the country, its population and the number of animals there is a surplus of equipment and the equipment is used in an uneconomic manner. There is some competition between the veterinary and public health laboratories and a lack of necessary information transfer, of systematic transfer of information and samples. In line with this laboratory testing is not well attached to institutions, i.e. pesticide analysis is conducted by the IPH while the administration and competent authority is the PPA which is not known by many government regulators.

The economic aspect covering the whole system of food control is for the most part not taken into consideration. All laboratories are almost fully equipped to engage in all types of analysis, but the capacity is only partially used. There is lack of funds for communication, reagents and setting-up of a management system as a pre-condition for accreditation. I.e. the PCR at the Veterinary Facility is not in use because there is no requirement for PCR testing by legislation (or industry).

Most of the visited laboratories test a low amount of samples, i.e. the IPH in Mostar with 170 samples on quality control in 2006 or the GMO laboratory at the agricultural institute of RS with 185 samples on GMO (Genetic Modified Organism) in 2005. **It is a general finding that all laboratories visited are generally not running economically. There is no data available on the number of samples per year at state level**. FBO are paying for samples, except for the samples taken for the residue monitoring program. No data is available on the ratio of inland control and control of food imports into BiH. Reportedly, the import control is not enough.

The following key issues have to be further addressed in order to enhance the BiH laboratory system and support industry:

- Testing scope: outdated methods and legislation; overlap in basic testing und no testing in specific areas, such as for pesticides, microbiology
- EU requirement for testing
- Microbiological testing, testing in accordance to EU requirements by hygiene package
- under utilization of equipment; security and safety issues; condition of the laboratories
- Quality management, quality assurance, accreditation, strategy
- Reporting
- Training
- NRL
- Animal health and diagnostic; issuance of health certificates

- Authorization and funding; Control, overview, chain of command

Comments on each of these issues are presented in Annex 5.

5.3.5 Recommendations

The objective of the assessment, in its core part, was to analyze the BiH laboratory structure controlling foodstuffs in a view fulfilling EU trade requirements and to recommend improvements thereby to advance the possibilities for exporting BiH products to the EU market. Testing in food safety (and related areas) is complex and has requirements for legislation, institutions, management/agencies, inspection, and information, communication and training.

5.3.5.1 Recommendation 1: Strategy in Food Safety including laboratory

A concise and forward leading strategy for the development of veterinary, medical and agricultural institutes and laboratories is required for BiH in order to deliver services to the industry and to protect public health as required by EU. It is necessary that laboratories are testing under official control, in line with EU requirements and cover all aspects of an EU-compatible food safety control system along the food chain risk-based, including animal health and plant health control (movement control and traceability). Adapting to the testing approach of EU it is necessary to gain export approval by the EU and to pave the way for an even stricter control by EU in future. This requires not only equipping but also a remodeling of the BiH laboratory system, especially since the current system does not protect the health of consumers and has costs for the industry.

Now it is on BiH to create and coordinate a laboratory network, to put in force standardized methods and reporting scheme easing the system of risk analysis and to adapt to required tests by EU in microbiology and for testing contaminants. The network belonging to the FSA requires supervision, information exchange in case of recalls and emergency reasons. **The future scenario will be a network of accredited laboratories controlling foodstuffs and providing service to industry** delivering further necessary data to a central body on foodstuff, veterinary and phytosanitary issues, in particular on pesticide residues, environmental and microbiological contamination.

It is highly recommended to **prepare a food safety strategy and action plan**. Drafting the plan will help analyzing the current food control system in all its parts, formulating actions and reforms for a modern food control system. It has been analyzed that the BiH food law requires to be amended and at the same time by-laws and other relevant legislation have to be repealed, such as the veterinary and sanitary law. Testing at entity level is not yet EU compliant, e.g., testing for pesticides (MRL). A strategic planning should address how to align testing requirements over time to that of EU upgrading the system state-of-the art (missing equipment, methods, competent staff, and accreditation).

As part of the strategy a legal plan has to be in place providing information and strategic action, also on withdrawal of old Yugoslav legislation. The plan should foresee coordination of EU projects in their legislative parts, transposition and implementation of the hygiene package and adoption of EU standards for testing at entity level aiming at a uniformed level of testing and should include responsibilities (who does what until when). The FSA will have a central role in legislative alignment, i.e. GMO testing is not covered by national legislation so far etc. Deficits until today are in implementation of the new legislation.

Enhancing laboratory capacities goes in parallel with a reform of other sectors of food control. The institutional reform has to address the inspection system, which should consider EU requirements (annual control plan, risk-based approach, HACCP audits etc.). BiH would certainly profit from a clear decision on, which inspectorate is controlling what food in order to avoid overlap in testing and to concentrate the efforts and expertise for required testing. A better coordination between SVO, FSA, PPA and NRL laboratories is needed (legal basis, work plan etc) and should evolve over time. The industry should no longer be burdened

by the system but profit by having state-of-the-art service, paying for testing which is required by trading partners and helping them to control their process.

It is proposed to prepare a concept paper for a unified Inspectorate and possible work mechanism. It is strongly recommended to **study carefully the new EU hygiene package** and take it fully into account when drafting new laws and organizing the services.

The food safety strategy will also help to identify donors for certain activities aiming at better coordination of activities in a time frame. Several donors have focused their support in the area of food safety in different aspects. A joint planning seems therefore necessary to evolve strategic and logic support, i.e. equipping should take place after laboratories are selected for official control.

All planning should be based on economic calculation since the network has to be financed by government in future (for official control) and only to some parts by the industry.

5.3.5.2 Recommendation 2: Registration of food business operators and introduction of GHP, GMP, GAP and HACCP as a prerequisite for trade to EU

Exporters must follow many public and private international food safety and quality requirements.[6] Most of them are basically on hygiene. For trade to EU, FBO have to have minimum hygiene requirements in place, which are described by Codex Alimentarius Good Hygiene Practice (GHP). BRC and IFS also have basic hygiene requirements as described by GHP. Requirements for testing by FBO are on basic process control, hygiene control and specified control (depending on the commodity, i.e. on contaminant and residues), and nutritional value. GHP and HACCP are not enforced by BiH law yet, thus not widely known and implemented.

All establishments producing food (FBO) for sale and export should thus:

- **Be licensed by the state,**
- **Implement an appropriate hygiene plan for HACCP system (self control), and**
- **Have access to an appropriate laboratory to carry out the tests required under their hygiene plan.**

Registration and licensing of FBO will be a prerequisite for export to EU. The categorization of FBO for upgrading is a necessary prerequisite for that and should start ASAP. A system how to categorize, register and license has to be developed by BIH (minimum criteria). It is recommended to have only one Competent Authority responsible for the authorization of establishments.

The new hygiene regulations impose the responsibility for food safety on the food industry and official control. **HACCP is a necessary requirement for trade; FBO have to apply self-control if the want to export to EU**. Also industry standards require as a minimum HACCP system. If the industry wants to implement HACCP, they may face the problem that there is no trained and competent service available to support them in the implementation process (both private and official). On the contrary, if BIH is remaining with the current system the service could have contradictive impact by enforcing the old legal instead of new EU requirements. Thus, **in a first step GHP (GMP) and HACCP have to become mandatory** by including the hygiene package of EU into national legislation and setting derogations for their implementation. The BiH food law has to be amended in this regard by including the CD Regulation 882/2004 and other parts of the hygiene package.

Inspectors have to be trained on hygiene requirements of EU and how to conduct HACCP audits in order to be able to advise the industry in implementing the new system and to control them. Official

[6] Such as by Codex Alimentarius, International Plant Protection Convention, EurepGAP, BRC, ISO, IFOAM, OIE, etc.

Inspection should decide on an appropriate investigation method in keeping with the risk on the basis of relevant food chain information. The FSA could start activities for developing GMP guidelines for certain branches while inspectors have to control GHP/HACCP and GMP. The industry has to have the correct information; in particular information on labeling requirements. There should be contact to industry association (if any).

A strategy for a sector-wise implementation of HACCP is necessary. In focus should be also to support Good Practices for primary production and industry branches (e.g., EurepGAP). It is highly recommended to develop HACCP systems for fish industry in a sector approach (HACCP pilot).

5.3.5.3 Recommendation 3. Proposals for upgrading existing laboratories capacities to discharge their food and feed safety duties

The FSA has to propose laboratories, which should work in accordance to the new legislation building up a structure for competent laboratories and NRL.

The basis for local and regional food safety laboratories should be the existing structure, but with animal health and plant health the current network is too large and BiH does not have the facilities to properly equip, support or manage all the existing laboratories. It is to consider that the network comprise fewer laboratories, which would be better equipped and better run and would provide a higher level of official food testing.[7]

Laboratories provide an impartial and confidential service to the inspectorates. **Adequate funding of the laboratories by central or local government has to be ensured to enable** them to undertake the necessary chemical analysis and microbiological examination of food and animal feeds. The new testing approach by EU is costly and has its requirements on training and education.

Given the fact that many of the food manufacturers are relatively small, it is not reasonable to expect that they can each sustain their own laboratory facilities. If HACCP is mandatory, food processors will come to present a proportion of the total laboratory test carried for food control. The tests will mainly comprise basic microbiology or simple chemistry on samples of food and water, or on swabs taken from different parts of the premises and equipment. These tests will be at the expense of the food producers, who may consequently make their own choice of laboratory, from:

- In-house laboratories set up and run by the food producers themselves (the normal approach of large EU producers);
- Accredited private laboratories, analyzing samples on contract for the food producers; and
- The network of regional and local state food laboratories.

For this reason, the establishment of independent laboratories to undertake analysis on a commercial basis could be encouraged and can serve also the industry's needs. The assessment showed that private laboratories in the food sector work rather for the official control than for the industry.

On the other hand, laboratories within the network could provide an important technical service to food producers in the near future but will not issue any official certificate. Certification remains the task of service/authorities. The laboratory should be seen as the value service to help the producer achieve the quality and safety that his customers require. Ultimately, market pressure for safety and quality will help to bring about the change to private laboratories.

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[7] EU has evaluated equipment needs for BiH with some strategic direction where the equipment should go. The equipment selected is for analyzing contaminants foremost (mycotoxins, heavy metals, veterinary medicine). The delivery of the equipment will be the earliest in 2009. A decision for laboratories operating official control has to be in place first.

The official laboratories must be managed in such a way that there are no conflicts of interest and they must have policies and procedures to ensure the protection of its clients' confidential information and proprietary rights, including procedures for protecting the electronic storage and transmission of results. The staff employed in the Official Laboratories should be suitably qualified and experienced. The management team should include at least one person who has a detailed knowledge and understanding of food, its chemical analysis and microbiological examination. A detailed knowledge and understanding of relevant law is necessary.

A laboratory network has to be created on the basic of future test capacity. The assessment of such laboratories will be the part of a laboratory strategy by FSA. The FSA is reassessing laboratories for official control. A strategy can be elaborated aiming at maximized efficiency in order to minimize the chronic problems of under use of equipment, labor inefficiency, security and safety, and outdated methodologies. One of the main strategic considerations will be the streamlining of tasks and diagnostic activities within and between laboratories by having in mind covering EU compatible areas in a longer term (such as testing for GMO, material in contact with food, radiation etc.). It is recommended to compare the status on testing with requirements to be fulfilled by EU in general and for trade in particular as part of their strategy on enhancing food safety capacities in BiH (see above). **The Council of Ministers should appoint a commission to set standards and criteria for selection** of a number of laboratories to be financed by a budget. Coordination between SVO, FSA and laboratories to determine tasks, resources and strategies seems to be necessary. (See Annex 6).

It is proposed to establish a central management/coordination unit for orchestrating the streamlining activities. The coordination unit should have rather a functional (like a task force) than a statutory role with an anchor in FSA (later in Ministry of Agriculture) to support high-level decisions. The unit will focus on working methods and use of resources, supported by an international legal expert and other specialists as required. There should be a Laboratory Strategy Working Group as well working on technical assistance. It is analyzed that the food law does not enough address laboratory coordination and responsibilities and would require a revision in this part. There should be a coordination between all BiH Competent Authorities for developing a laboratory network and strategy.

5.3.5.4 Recommendation 4: Accreditation of selected laboratories

Accreditation is essential for laboratories working within official control. EU has granted a four-year transition period for reaching accreditation for laboratories for official control. So far only a few laboratories in BiH are accredited. This accreditation by BATA is not internationally accepted.

BiH has envisaged accreditation for their laboratories working for official control at the end of 2006, but has never worked on strategy. Under the above-mentioned consideration it makes no sense to support too many laboratories in reaching accreditation, instead only a few selected laboratories should be supported in accreditation and gaining new competence in testing requirements of EU (SEE). Most laboratories visited so far are non accredited laboratories, but some can be accredited in the near future.

It has to be noted that accreditation is time consuming and a costly exercise and often underestimated in its requirement by time and resources. It is clearly from advantage if a few selected laboratories are supported in their accreditation process by a project. After selection of laboratories a strategy for accreditation makes sense.

Accreditation method-wise is envisaged. Laboratory staff has to be trained, in particular the Quality manager of a laboratory in quality management and requirements of ISO 17025 in order to implement the system. Two projects are currently helping supporting laboratories in their accreditation process. FAO and the EU Twinning project on veterinary service are helping to improve the competence of NRL. Both of the projects have started their activities, but have not enough capacities to reach accreditation during their running time.

In terms of accreditation of laboratories there are two options:

1. By taking into account the financial budget and requirements on equipment and personnel only a few laboratories are selected and supported in accreditation. For example to have one laboratory for residue monitoring would make sense since no coordination of different management structures is required and would make optimal use of resources.
2. Select more laboratories but give them a time span for accreditation. Any none accredited laboratory will fall out of the system (which has to be enforced). Accreditation can be supported by a project sector-wise, i.e., for foodstuff laboratories.

Meanwhile, the national accreditation body (and metrology) in BiH has to improve its service and staff (auditors for laboratory accreditation) or outside of BiH have to be used for accreditation.

BATA has to be involved in developing a strategy for accreditation in accordance to ISO 17025. A road map with recommendations concerning short- , medium – and long-term perspectives of laboratories should be drafted and would help the process. A core activity would be to establish working group(s) or use existing ones to prepare for accreditation procedure. It has to be noted that permanent support for accreditation on site will ease the process.

The activity should be supported by a project since there is only a four-year transition period granted by EU for official control laboratories for accreditation. Selected laboratories will be supported in accreditation for microbiological tests and in residue testing.

5.3.5.5 Recommendation 5: Improve operation practices of laboratories

In order to comply with EU trade requirements a list should be drafted on test requirements by EU (and directives) to be compared by methods used in BiH. The list should comprise sampling and testing of foodstuffs, animal and plant diagnostics. The oversight will help planning future testing requirements and requirements for training and equipment. The scope of testing will arise with time (and by requirements of industry and EU). However, it is necessary that BiH laboratories build up competence by applying standardized and validated methods tested by proficiency tests.

A main focus of the strategy for enhancing laboratory capacity in future will therefore be to improve working practices, including elements such as:

i) quality management;
ii) quality assurance;
iii) sampling
iv) risk based approach;
v) adaptation of laboratory methods to new tests (multiple tests, screening tests, sophisticated tests (PCR);
vi) adaptation of methods based on Standard Operating Procedures (important for accreditation);
vii) transition of central laboratories to reference laboratories that have reference and monitoring responsibilities for respective regional laboratories; and
viii) introduction of LIMS as a core function for the working practices of the laboratory.

Supporting selected laboratories in the above-mentioned aspects will enhance their competence. A step-wise implementation is recommended by developing area of work and a work plan (as part of the accreditation process, see Recommendation 5). It is further recommended to link laboratories working in the area of residue monitoring to EU reference laboratories for starting to participate in proficiency tests in order to enhance their competence and make contact etc. The EU (CRL) reference laboratory in Berlin e.g., allows transition countries to participate in proficiency tests for free. For this NRL should start using standardized

methods as laid down in laboratory manuals and should actualize methods on latest scientific standards (AOAC, CEN, EU etc.) regularly.

Emphasis is put on a review of all laboratory layouts (safety aspects, bio-security, separation of food and clinical microbiology etc.) and improvement of technical equipment (molecular biology, chemical analysis etc.). Further, a fundamental review (potentially from an external reviewer) of the layout of all laboratories to fulfill BSL 2 seems to be necessary (for NRLs). There is a need for equipment to control food hygiene relevant hazards (e.g., Salmonella, Trichinella, Tuberculosis).

5.3.5.6 Recommendation 6: Animal health control

For trade of animal origin to EU, a functional surveillance and diseases control has to be in place. It is a necessary trade requirement to have areas pest free where the produce origins from, esp. for products of animal origin.

During the visit BiH had problems with Brucellosis and Classical Swine Fever.

A functional system will have requirements on:

- Registration of animals, registration of farms, movement control;
- Service, administration and policy on animals health in BiH;
- Diagnostic, laboratory structure;
- Upgrade for level 2 testing facilities;
- Trained experts;
- Fish animal health;
- Legislation on registration of farms;
- Incinerators (more), rendering;
- Good practices;
- Animal welfare; and
- Budget for vaccination etc.; functioning veterinary offices and service.

All the aspects have to addressed and implemented (legislation has to be in place). Several of the aspects mentioned above will be supported in their implementation by donors (EU, World Bank) over time. Since some export potential is seen for aquacultural products, further improvement of the system is required.

In a next step legal alignment and developing a law on fish health is necessary. The fish health legislation has to consider zoning of streams and registration of fish farms. Trade between fish farms cannot be controlled so far, in particular if there are unregistered farms. In addition capacity at SVO for aquaculture (staff missing) is not enough and the knowledge of fish diagnostic/virology within the laboratory network has to be enhanced. Some equipment at the NRL for diagnostic in fish diseases is missing, such as incubators for tissue cells. Virology diagnostic will start earliest end of 2007. Traffic feed/fish has to be controlled as well.

So far any control related to fish health is on a voluntary contract basis. Traceability in general requires be developing and guaranteed. The sector has support by FAO, but there is further support required in order to enhance trade capacity for BiH aquaculture industry. Industry has to be supported in application of good practices and traceability.

The NRL should be in netter cooperation with the NRL for Fish Diseases in Arhus/Denmark (for fish diseases of List I and II - Council Directive 91/67/EEC). The Community Reference Laboratory (CRL) is harmonizing diagnostic techniques and disseminating information of mutual interest.

5.3.5.7 Recommendation 7: Improve microbiological testing

This assessment showed that microbiological issues have not been addressed enough by former assessments. It is an important aspect to upgrade BIH capacity in this respect in order to fulfill new EU trading requirements on hygiene. Support will go to industry for general hygiene compliance and to microbiological laboratories for training, equipping, addressing the topic, basic hygiene handling etc. There is a need to train general hygiene handling in laboratories and quality assurance in microbiological testing. The clinical part within PHI has to be separated from food microbiology, which would require major investment for reconstruction and refurbishment at IPHs. It has to be decided which facilities will be restructured and refurbished by BiH in order for laboratories to stay in the network for official control and it is advised to support and select a main laboratory for controlling and testing microbiology of a) food of animal origin and b) foodstuffs.

Training for industry/retail on basic hygiene requirements is further emphasized to be planned and conducted in accordance to Codex Alimentarius requirements.

5.3.5.8 Recommendation 8: Develop capacities of the Plant Protection Administration

Unfortunately BiH' PPA does not currently meet international standards with the result that their certifications are not accepted by authorities or buyers in international markets. Using the International Plant Protection Convention systems approach, the PPA will have overall responsibility to provide training and arrange the procurement of equipment to build the capacity of the agency to achieve international standards requirements.

Export for fruits and vegetable requires pesticide analysis for control of contamination. For this the PPA and service has to be established functioning. Pesticide control is conducted by IPH laboratories and does not belong to the service of plant protection so far. It is important that Plant Health Certificates issuance has to be based on diagnostic and is following written introduction. For this administration and legislative capacity has to be in place.

A need for training on multi-residue methods of analysis and quality control procedures for pesticide residues analysis has been identified and more equipment for pesticide analysis is needed. The topic has to be addressed urgently since producer of fruits and vegetables are aiming at EurepGAP certification and there is a demand by producers in Mostar for testing of pesticides. Private laboratories are adapting to the requirements while official control is testing in accordance to old JUS requirements and has to shift the direction towards EU requirements.

Support for the PPA by EU and World Bank will come in 2009 at the earliest. The authority is too slowly progressing and requires immediate attention in order to set and address requirement for trade, such as issuance of Health Certificates and pesticide analysis and building up their administration in relation to international requirements. In parallel there is a need to train industry in IPM.

5.3.5.9 Recommendation 9: Capacity building - qualification and training of staff

Several needs for training have been identifies during the assessment. Generally, the following needs were identified:

Develop training plans and conduct trainings for:

- Government regulators on EU topics, such as legislation, risk assessment, institutional set-up, tasks and functions of Food Agencies etc.;

- Laboratory staff on QM, QA, analytic, information management;
- Laboratory manager have to be trained and educate in QM, ISO 17025 requirements;
- Management training for FSA and inspectors in general;
- HACCP audits, hygiene package for inspectors;
- SVO, PPA in developing business plans;
- Industry on good practices, hygiene, Codex, HACCP; and
- Selected staff in information management systems and LIMS, i.e., at the FSA.

Implement and train on HACCP. A continuous training program should be established both for the veterinary services and the industry on internal controls. The industry needs to take charge of their own affairs and increasingly organized their own training on internal controls, pre-requisites and HACCP.

A pilot project for implementing GHP, HACCP has been proposed already under Recommendation 2 where both industry (sector) and inspectors take part.

5.3.5.10 Recommendation 10: Information management within laboratories and reporting

A shift to electronic reporting, data storage and communication is required in BiH and will support the process of risks analysis, enhancing communication by laboratories and services. Ways of communication and reporting have to improve and statistics applied.

Selected laboratories should implement a Laboratory Information Management System (LIMS) while the FSA requires establishing a data base.

5.3.5.11 Recommendation 11: Support regional initiatives in food safety related to trade

Cooperation in SEE in the area of food safety is proposed in order to discuss the topic in a region and to narrow regulatory differences for SEE.

The initiative could help developing own trading standards and quality assurance schemes, and could also contribute to the resolution of differences across borders. By narrow regulatory differences for SEE own trading standards could be develop within voluntary quality assurance schemes contributing to the resolution of differences across borders. Countries in SEE could formulate many of their food safety regulations jointly in order to reduce regulatory trade barriers and transaction costs for industry. "Record of Understanding" could be drafted under which they try to facilitate agricultural trade in a number of different areas, including harmonizing some food safety testing procedures.

It is recommended supporting regular meetings of FSA staff in SEE or workshop series in order to exchange views and to learn from each other on the establishment of Agencies and laboratory control and to discuss trade aspects and possible joint initiatives in NRL. Croatia, planning to join EU in 2009, will soon have the same requirements in food safety as EU and thus bilateral or regional agreements could come into force. There should be talks on future cooperation and trade between them. Joint export capacity to EU could be developed.

The US Department of Commerce, Commercial Law Development Program (CLDP) i.e. is supporting some regional initiatives in food safety in SEE (including BiH) but they do not address coordination bodies, such as Food Safety Agencies. EU is not supporting regional projects at all.

5.3.5.12 Recommendation 12: Support the national accreditation body

Support to BATA, the national accreditation body, is required in order to strengthen their operation by improving rules and regulation. Training of inspectors in auditing laboratories is considered necessary. Metrology has to be in place (traceable). Support in this sector has to be based on financial capacities and demand by public and government.

5.3.5.13 Recommendation 13: Protection of traditional products

Establish a niche market by protection of traditional products (under EU) for the EU-Diaspora. The same goes with Halal certification. Specific standards for traditional products could be developed, such as special regulations on hygiene and quality requirements for traditional products.

5.3.5.14 Recommendation 14: Support industry (associations) in developing good practices

BiH should take a strategic approach helping industry to develop or strengthening existing industry association and support them in drafting Good Manufactory Practices; in particular support for the fruit and vegetable industry in EurepGAP certification should be anticipated as well as implementation of GAP by specific sectors.

6.0 SECTOR ASSESSMENT AGRICULTURAL AND FOOD PRODUCTS

6.1 GENERAL SECTOR PROFILE

The BiH agricultural and food sector accounts for approximately 12% of the GDP, but employs more than 20% of the workforce. The majority of all farms in BiH is focused on subsistence farming with no or only very little marketable surplus production. These small-scale farms fulfill a social function, which is important at this point in time, but they will not sustain in future. On the other hand, there are a few ex-state farms, which have been privatized, producing on large scales. After the war, more and more private farmers have increased their farm size and have intensified their production. Apart from these farms, agricultural production is not very intensive and productivity is comparatively low.

The export value of food products has grown from 142 million KM in 2003 up to 259 million KM in 2006, whereas the imports have remained stable. Agricultural and food exports as a percentage of total exports are declining, but in nominal terms they have been growing from 2003 to 2006 by more than 80%. This is an encouraging sign of the growing competitiveness of the BiH agricultural and food processing sector. Due to the poor agricultural statistics, no reliable and consistent data about the domestic production is available.

TABLE 1. IMPORTS AND EXPORTS (IN MILLION KM)

	2003	2004	2005	2006
Total Imports	8,319	9,306	11,179	11,389
Total Food Imports	1,868	1,959	1,982	1,945
% Food Imports of Total Imports	22.4	21.0	17.7	17.1
Total Exports	2,323	2,819	3,783	5,164
Total Food Exports	142	167	223	259
% Food Exports of Total Exports	6.1	5.9	5.9	5.0
% coverage food imports by food exports	7.6	8.5	11.2	13.3

Source: Central Bank BiH

BiH's most important trading partners for agricultural and food products are Croatia, Serbia, Montenegro and Macedonia. This is mainly because of traditional trade contacts and consumption preferences of the population. More and more companies have established or are establishing trade contacts with EU importers. The BiH Diaspora and foreign workers from BiH living abroad are potential customers of their products. This is true especially for final products, like processed fruits and vegetables, bakery products, teas or dried meat and sausages.

6.2 SUBSECTORS WITH POTENTIAL FOR EXPORTS TO THE EUROPEAN UNION

6.2.1 Products of non-animal origin

6.2.1.1 Fresh fruits and vegetables (including fresh and frozen)

BiH has favorable conditions for the production of fresh fruits and vegetables, but during the war many fruit orchards were destroyed or abandoned. In the northern plains large-scale open field production of vegetables and orchards with continental fruits can be expanded and intensified. The southern region is very suitable for greenhouse production and Mediterranean types of fruits (e.g., figs, peaches, nectarines and citrus), as there is fertile soil and water for irrigation available. The Mediterranean climate allows the expansion of the growing season without additional major expenses for heating. This is a competitive advantage for BiH producers. The production of various types of berries is increasing all over BiH.

TABLE 2. EXPORT OF VEGETABLES AND FRUITS (IN THOUSAND KM)

	2003	2004	2005	2006
Fresh vegetables (incl. dried and frozen)	14,195	11,888	14,898	15,670
% sold to HR, SCG and MK*	45.6	25.9	25.4	34.6
% sold to EU**	29.5	72.3	71.6	63.3
Fresh fruits and berries (incl. dried and frozen)	12,702	10,526	13,470	22,138
% sold to HR, SCG and MK*	42.2	58.6	41.6	31.8
% sold to EU**	46.8	39.6	57.6	62.8

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

The export values of fruits and berries are growing, whereas they are stable for vegetables. In 2003 around 45% of the vegetables were exported to neighboring countries like Croatia, Serbia-Montenegro and Macedonia, this share has been shrinking down to 35%. During the same period the share of vegetables being exported to the EU has been growing from 29% to 63%. A similar development can be observed for fruits. The growing export volumes of berries account for a good part of this growth. This shows the good competitive position of fresh BiH fruits and vegetables.

The EU has no import barriers for fruits and vegetables from BiH, and the percentage of fresh fruits and vegetables being exported to the EU is growing steadily. With an expansion and intensification of the fruit and vegetable production there will be more tradable volume available in the next few years. BiH producers start to improve their production techniques and apply Good Agricultural Practices.

The major importers in the EU and soon in Croatia as well require standards and procedures to ensure product safety, such as EurepGAP (www.eurepgap.org), BRC - British Retail Consortium (www.brc.org.uk) or IFS - International Food Standards (www.food-care.info). All these standards are set by the private sector and are not mandatory to export to the EU. They are required only, if the importer is member of any of the consortia or sells to any of its members. However, most retailers in the EU are member of one of the consortia. Therefore, BiH producers are well advised to start implementing Good Agricultural Practices as soon as possible. This is also important because of the EU requirements regarding the maximum levels of pesticide residues in fruits and vegetables.

Because most producers are too small to export their products, they need to establish producer groups who gather larger quantities or they have to use the services of market integrators. Market integrators fulfill an important role in organizing the production of smaller producers, they promote common quality standards and often provide the needed agricultural inputs. A good example of a well-functioning market integrator is Vegic Commerce from Ljubuski. Last year Vegic Commerce sold all own production and about 900 t of fresh fruits and vegetables from small farmers to Konzum in Croatia. In 2007, they plan to export 3,500 t fruits and vegetables from small farmers.

EurepGAP (www.eurepgap.org) started in 1997 as an initiative by retailers belonging to the Euro-Retailer Produce Working Group (EUREP). British retailers in conjunction with supermarkets in continental Europe were the driving forces. They reacted on growing concerns by the consumers with product safety, environmental and labor standards and decided to take more responsibility for what happened in the supply chain. On the other hand the development of common certification standards was also in the interest of many producers. Those with contractual relations to several retailers complained that they had to undergo multiple audits against different criteria every year. On this background EUREP started to work on harmonized standards and procedures for the development of Good Agricultural Practices (GAP) in conventional agriculture.

EurepGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. It is an equal partnership of agricultural producers and retailers, which want to establish certification standards and procedures for Good Agricultural Practices. EurepGAP is a pre-farm-gate-standard, which means that the certificate covers the process of the certified product from before the seed is planted until it leaves the farm. EurepGAP is a business-to-business label and is therefore not directly visible for the consumers.

EurepGAP standards exist for fruits and vegetables, flowers and ornamentals, livestock, aquaculture and coffee. Currently, there is only one EurepGAP certification body in the Balkan states in Macedonia (www.incebo.com.mk). With support of the World Bank project in the Herzegovina several EurepGAP trainers have been educated who are guiding fruit and vegetable producers through the process. Vegic Commerce in Ljubuski expects to be certified by the end of June this year as the first producer in BiH.

6.2.1.2 Processed fruits and vegetables

There are several medium and small-sized processors of fruits and vegetables in BiH, most of them organized in the BiH Association of Fruit and Vegetable Producers and Processors. Their production assortments range from semi-finished products, like fruit concentrates and fruit distillates to final products, such as jams, marmalades, juices and pickled vegetables. One processor (Vegafruit) has started to introduce organically certified products. In this particular case, both raw materials and the production process need to be organically certified. Besides the organic products, there is an **export potential for certain traditional products, such as Ajvar or products based on berries.** Especially the latter ones are labor intensive and given the competitive labor costs these products have a competitive advantage. A strong competition exists with neighboring countries, especially from producers in Serbia.

TABLE 3. EXPORT OF PROCESSED FRUITS AND VEGETABLES (IN THOUSAND KM)

	2003	2004	2005	2006
Processed fruits and vegetables	18,752	18,986	19,801	21,646
% sold to HR, SCG and MK*	65.5	79.6	77.0	78.9
% sold to EU**	10.7	15	16.7	13.9

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

Organic certification provides a promising opportunity for producers to obtain higher prices for their products and to enter into new markets. The organic sector in the EU is growing rapidly and demand for various products, such as fresh and processed fruits and vegetables, mushrooms and medicinal and aromatic plants exists. BiH producers can meet these demands and sell their products into the EU.

In order to sell products under the organic logo, they have to be certified. The Council Regulation 2092/91 of June 1991 on organic production of agricultural products and its subsequent amendments regulates among other things how organic products can be imported from third countries into the EU.

All products have to be certified by accredited certification bodies. In the case of BiH, products were certified by foreign certification bodies that have their EU accreditation according to ISO/IEC 65 or EN 45011. Only the field inspection was performed by BiH inspectors, certificates were issued by accredited certification bodies from Switzerland, Sweden, Italy, Germany and the UK.

With support from Sida the Sarajevo based local organic certifier OK - Organska Kontrola (www.organskakontrola.ba) was established. Organska Kontrola was recently assessed by IOAS (International Organic Accreditation Service, www.ioas.org), whether they comply with the rules and procedures of the International Federation of Organic Agricultural Movements – IFOAM (www.ifoam.org). OK expects to get the IFOAM accreditation soon and the EU accreditation until the end of 2007. With the EU accreditation products can be certified by OK without any re-certification by another certifier. This will reduce the costs for organic products sold into the EU. OK plans to get the accreditation for the NOP standards for the US organic market.

The export values are slightly growing since 2003. The predominant markets for processed fruits and vegetables are Croatia, Serbia, Montenegro and Macedonia. Consumers in these countries are familiar with the traditional brands, whereas EU consumers (except the BiH Diaspora) are not. Producers of semi-finished products have a stronger export orientation compared to those producing final products. Semi-finished products are used as ingredients for the food industry and are exported also to the EU.

The EU has no import restrictions or special requirements for those types of products, except the maximum levels of pesticide residues. Exporters get the required certificates from domestic institutions (RS: Institute for Health Protection, FBiH: Institute for Public Health) and laboratory analyses are performed at domestic laboratories (RS: Veterinary Institute Banja Luka, FBiH: Department for Food Control at the Veterinary Faculty Sarajevo). Importers are requesting samples prior to any sales and perform own laboratory analysis in the importing countries.

6.2.1.3 Bakery products

BiH has a few larger bakeries already exporting or with export potential (e.g., KLAS and Sprind from Sarajevo, Lasta from Capljina, Mija from Citluk or Mira from Prijedor). The majority of the small-scale bakeries supply local markets with fresh products only. **Export potential exists for frozen bakery products (bread, pastry) and composite products (pies filled with cheese and meat).**

TABLE 4. EXPORT OF BAKERY PRODUCTS (IN THOUSAND KM)

	2003	2004	2005	2006
Bakery products	13,265	17,990	22,745	25,220
% sold to HR, SCG and MK*	84.0	85.2	82.8	78.7
% sold to EU**	7.1	10.8	13.9	18.0

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

Since 2003 the export values of bakery products have almost doubled and the share of products being sold in EU member states has been growing significantly.

There are no EU import barriers for bakery products, except for composite products. If bakery products contain ingredients of animal origin in higher contents, like cheese and meat, they cannot be exported to the EU. BiH is not listed as a 'third country' eligible to export products of animal origin (see text box on following page). Cakes, pastries, sweet pies and chocolate can contain small amounts of products of animal origin, such as eggs, milk, butter or suet. They may be treated as products of animal origin if they have high levels of dairy products and have not undergone sufficient heat treatment or if they are not ambient stable. Exporting bakeries did not mention that as a problem for exporting to the EU. Usually, the EU importer inspects the production facilities prior to exports and asks at times for an independent inspection (e.g., KLAS Sarajevo is inspected by SGS on behalf of the importer occasionally). Laboratory analyses are performed by BiH institutes, such as the Veterinary Faculty in Sarajevo, the cantonal Institutes for Public Health or the Agricultural Institute in Banja Luka (for GMOs).

6.2.1.4 Specialty products (Medicinal and Aromatic Plants and products thereof, Mushrooms)

BiH has a large variety of different medicinal and aromatic plants and mushrooms. Most of the products are from wild collection, only few producers have started cultivation. Natural resources for wild collection are limited, therefore, the cultivation of herbs and spices provides a possibility for further expansion of export volumes. **The products are exported either as raw material (cleaned, dried or frozen, sometimes cut) or as semi-finished products, such as essential oils. Most products are exported in bulk, only few final products, like herbal teas are sold to EU.** Several producers are selling their products as organic, which opens new markets and allows for better prices.

TABLE 5. EXPORT OF MUSHROOMS AND MEDICINAL AND AROMATIC PLANTS (IN THOUSAND KM)

	2003	2004	2005	2006
Mushrooms (fresh and dried)	1,967	4,968	4,081	4,667
Medicinal and aromatic plants	n.a.	4,705	4,985	6,774

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

The EU has no import restrictions on this kind of products. Necessary documentation is issued by BiH institutions and laboratory analyses are performed. For wild mushrooms additional testing for the level of radiation is required, but can be done at the Veterinary Institute in Banja Luka.

6.2.1.5 Wine

Wine production in BiH is still not on the pre-war level, because many vineyards were destroyed during the war. Since a few years production is growing again, more and more wineries are planting new vineyards.

BiH wines can be sold to the EU without any barriers, the Agronomic Institute in Mostar has been nominated as the competent authority for issuing the quality control certificates. The private laboratory Bobita in Citluk (ISO 17025 accredited by the BiH Institute for Accreditation) and the laboratory of the Agricultural Faculty in Sarajevo are nominated as the competent laboratories for quality control.

The EU has a quota for wines from the western Balkan countries, but the **quota has not been fulfilled in the last years (152,000 hl per year)**. Only three wineries, Hercegovinavino from Mostar, Hepok vinarija from Ljubuski and Andrija from Citluk account for almost 95% of all wine exports, all other wineries are much smaller.

6.2.2 Products of Animal Origin

The EU has special rules for the import of products of animal origin, which are different from those for products of non-animal origin. Products of animal origin are considered as 'high risk' products, therefore, the EU wants to be sure that imports from third countries comply with the EU rules on food safety.

Imports of products of animal origin into the EU

The European Union is the biggest importer of food worldwide. The EU's import rules for products of animal origin seek to guarantee that all imports fulfill the same high standards as products from EU Member States - not only with respect to hygiene and all aspects of consumer safety but also, if relevant, regarding their animal health status.

The new food law of the European Union puts strong emphasis on process controls - throughout the food chain, from farm to fork. The general food law supports the flow of information and the management of quality. This philosophy reflects the demands of the consumer and exploits the opportunities opened by technical progress. Checks on the end product alone would clearly not be capable of providing the same level of safety, quality and transparency to the consumer.

The EU has designed a multiple-step procedure for the evaluation of the eligibility of third countries for exporting products of animal origin to the EU:

1. The national authority of a third country must submit a formal request to the Directorate General for Health and Consumer Protection (DG SANCO) of the European Commission to export products of animal origin to the EU. The request should contain confirmation that the authority can fulfill all relevant legal provisions to satisfy EU requirements.
2. The Directorate-General for Health and Consumer Protection sends out a questionnaire that should be completed and returned. Information on relevant legislation, competent authorities, hygiene and many other elements are requested.
3. The residue monitoring plan of the exporting country must be submitted and approved at this stage (if not already done).
4. If the evaluation of the residue monitoring plan and the questionnaire is positive, an inspection by the Food and Veterinary Office is carried out to assess the situation on the spot.
5. Based on the results of the inspection and the guarantees given by the exporting country, the Directorate General for Health and Consumer Protection proposes the listing of the country, the specific conditions under which imports from that country will be authorized and the list of approved establishments in the country. These are then discussed with representatives of all EU Member States.
6. If the Member States have a favorable opinion on the proposal, the European Commission adopts the specific import conditions. Lists of eligible establishments can be amended at the request of the exporting country and are made available for the public on the Internet.

The EU Food and Veterinary Office performed a first inspection visit in November 2000 to evaluate the veterinary service, the general animal health situation and the production standards for fresh meat and meat products. The results of the inspection were rather negative and the BiH State Veterinary Office did not reply to any of the recommendations until 2003. A second inspection took place in August/September 2005 in order to evaluate the public health and animal health controls and the conditions of production of fishery products and live fish. The report shows considerable improvements in the public veterinary health and the BiH State Veterinary Office (SVO) expects that BiH will be listed for exports of fish and fishery products soon. The BiH residue monitoring plan for fish diseases was approved by the EU in late 2006, but the SVO has not yet started with the systematic registration of all fish farms and fish processors, which is an essential precondition to any exports into the EU. The inspection visit of the Food and Veterinary Office, which was planned for fall 2007 has been cancelled by the SVO for lack of time. According to information received from the SVO, BiH is not yet listed as a third country eligible to export products of animal origin to the EU, but has submitted all necessary documentation to DG SANCO and is now waiting for their reply.

6.2.2.1 Freshwater fish

BiH has a considerable potential for the production of freshwater fish, especially trout and carp (fresh, frozen and processed). The lakes and rivers with their clean water provide a good production basis. Besides a number of small farms supplying the domestic market, there are two larger processors (Norfish in Mostar/Blagaj and Tropic in Banja Luka). Both processors have their own fish farms and hatcheries. During the inspection visit of the EU Food and Veterinary Office in 2005 both processors and a few more fish farms were visited. The situation in the fish farms was satisfactory, but the processors have to improve their quality management systems. The BiH State Veterinary Office has submitted a residue monitoring plan that was approved by the EU in late 2006. The SVO has started to implement the monitoring plan, but has not started the systematic registration of all holdings, which was another essential requirement. Therefore, it cannot be expected that fish exports can begin in 2007 already.

TABLE 6. EXPORT OF FISH (IN THOUSAND KM)

	2003	2004	2005	2006
Fish	9,190	9,303	11,890	15,077
% sold to HR, SCG and MK*	83.9	92.6	98.8	99.4
% sold to EU**	10.0	7.2	1.1	0.2

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

Currently, BiH exports fish and fishery products primarily to Serbia and Montenegro. The EU introduced in 2000 import quotas for certain types of fish from the western Balkan countries (EC 2007/2000) and eliminated the tariff rates.

6.2.2.2 Honey

The majority of honey in BiH is produced by small beekeepers. There are only a few larger beekeepers and processors who buy up honey from small producers. Currently, **all honey is sold domestically at comparatively high prices**. An export potential exists only for high quality, mono-floral, organic honey, mainly from the Herzegovina region (e.g., sage, lavender, citrus). This honey could achieve good prices on EU markets.

In order to get on the EU third country list for honey, all beekeepers have to be registered by the BiH State Veterinary Office. The registration has not even started. Furthermore, BiH needs to demonstrate that the residues in honey, especially pesticides and antibiotics are monitored and within the acceptable limits. A residue monitoring plan has been submitted to the EU, but is still awaiting approval.

6.2.2.3 Meat and meat products

BiH has a huge trade deficit in meat and meat products. Processors complain that domestic beef is too expensive and not available in sufficient quantities. Therefore, most of the beef for processing purposes is imported from the EU and South America. When the imported beef is processed in BiH, these products do not fall under the preferential treatment of the EU or CEFTA, because the share of domestic value addition is too small. There is only one slaughterhouse and processing facility for poultry products that has good and modern facilities (Brovis in Visoko). Currently, Brovis is selling on the domestic market, because prices are good and the market is by far not saturated.

TABLE 7. EXPORT OF MEAT AND MEAT PRODUCTS (IN THOUSAND KM)

	2003	2004	2005	2006
Meat and meat products	2,060	2,580	2,236	1,727
% sold to HR, SCG and MK*	98.4	85.8	80.8	85.6
% sold to EU**	1.5	14.2	13.0	n.a.

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

An export potential exists for special BiH products, such as dried beef and dried sausages, which are popular in the BiH Diaspora living in the EU. However, it will not be possible to achieve exports to the EU in the near future due to significant deficiencies in the BiH food safety system.

Case Example: Brajlovic, Sarajevo

Brajlovic is a meat processor located in Sarajevo. Their products are based on beef and poultry meat (chicken and turkey). Beef is 100% imported from the EU and South America, whereas the poultry meat is from domestic producers. Brajlovic is selling all their products in BiH.

The company realized that there is a market for their products in the EU, especially for dried beef (suho meso) and Bosnian dried sausage (sudzuk). In order to supply the EU market, Brajlovic opened a processing facility in Austria in 2003. Their sales reached 3 million EUR in 2006 and 95% of the production are exported into other EU countries.

6.2.2.4 Dairy products

Currently, only a few dairies are exporting to neighboring countries, like Meggle from Bihac, Tuzla dairy, Danube Foods Group from K. Dubica or Livno dairy. **Most exports are UHT milk**, only the Livno dairy exports cheese in considerable quantities. Although there is currently **no export of dairy products into the EU**, an export potential exists for certain special types of cheese (e.g., Livno type, Travnicki Sir, Trapist).

TABLE 8. EXPORT OF DAIRY PRODUCTS (IN THOUSAND KM)

	2003	2004	2005	2006
Dairy products	5,133	11,593	23,563	29,915
% sold to HR, SCG and MK*	92.6	97.1	99.4	98.2
% sold to EU**	1.1	1.1	0	0

* HR – Croatia, SCG – Serbia and Montenegro, MK - Macedonia

** 2003: EU 15, since 2004: EU 25, including Switzerland and Norway

Source: BiH Agency for Statistics and BiH Foreign Trade Chamber

This export potential cannot be realized within a short term, because the situation of the veterinary public health and food safety in BiH does not comply with the required EU standards. For example, the prevalence of Brucellosis among sheep and cows is far higher than internationally accepted. Brucellosis can be eradicated by vaccinating all cows and sheep, but then no dairy products are allowed to be exported for several years, because there is no possibility to analyze whether the slaughtered animal was Brucellosis positive or vaccinated. Another possibility to control Brucellosis is to test all sheep and cows and slaughter only the infected animals. This requires a well organized public veterinary system, which is not the case in BiH at present.

6.3 CAPACITY OF INTERESTED COMPANIES TO FULFILL EU IMPORT REQUIREMENTS

Only a minority of the BiH food processing companies has implemented suitable quality management systems, although it is already a requirement according to the BiH Law on Food. Not even all exporting companies have quality management systems. Most of the exporting companies are aware of the need and are planning to install adequate systems in the near future. **The more advanced exporters have HACCP systems in place and often also ISO 9000, rarely ISO 14000**. The new ISO 22000 standard on food safety management systems, which incorporates ISO 9000, the basics of HACCP and Good Manufacturing Practices, is virtually unknown. Meanwhile, more and more producers of fresh fruits and vegetables are considering the EurepGAP certification. This will allow them to expand their exports into the EU. There are producers, like Agrofruit from Brcko who were exporting fresh cherries and plums to Austria but had to stop because of the missing EurepGAP certification.

6.4 CONSTRAINTS AND NEEDS EXPRESSED BY INTERESTED COMPANIES

During the company visits several obstacles to exports were mentioned:

- Visa requirements and procedures: The procedures for obtaining Schengen-Visa for the EU are complicated and time consuming and visa are issued only for short periods.

- Customs procedures: Often customs offices at the border are working only from 8:00 till 17:00 hours and if a shipment arrives outside working hours it has to wait until the next day. This is a problem particularly for fresh and perishable goods. The procedures are slow and inefficient.

- Inspection services: Companies complain that inspection services are erratic and not evenly spread among all companies. The inspectors have preferences among companies and corruption is widespread. The situation has not improved after the reorganization of the inspection services.

- High costs for laboratory analysis: Domestic laboratories charge high fees for their analysis and companies often have to wait a long time for the results. Therefore, some companies have their samples analyzed in laboratories in Croatia.

- Issuing of phytosanitary certificates: According to international rules and conventions, phytosanitary certificates which are needed for the export of certain fresh fruits, vegetables, mushrooms and herbs can be issued only by one competent authority. The BiH Administration for Plant Health is BiH's competent authority. But as the Administration is not yet fully operational, they are not issuing phytosanitary certificates nor have they authorized any other institution (like the phytosanitary inspection) to do so. As a result, phytosanitary certificates are currently still issued by various institutions, like entity or cantonal Ministries of Agriculture and inspectorates. As this practice is not in accordance with international rules customs officials in the EU, but also in neighboring countries can reject BiH certificates at any time.

- Passiveness of the BiH State Veterinary Office: The SVO does not communicate with the private sector. They have never informed fish farms and processors about the results of the inspection of the EU Food and Veterinary Office, nor did they inform about the necessary steps to take. The SVO has submitted the required documentation for BiH to be listed as a third country to EU DG SANCO, but does not communicate with them. Without active communication with the EU officials in Brussels, the administrative procedures last much longer than necessary.

- Financing: Companies have difficulties in finding suitable loans for financing the export business. Special credit lines are missing.

6.5 POTENTIAL ASSISTANCE AREAS AS EXPRESSED BY COMPANIES

- Better information on EU import requirements: Companies are not well informed about the import requirements of the EU. Specific information packages will be useful to provide the necessary information for potential exporters. Furthermore, general information about EU import procedures is not very common among the food industry and the administration as well.

- Training in introduction of quality and food safety standards: Although the BiH Law on Food requires quality management systems, there is a widespread lack of knowledge about quality standards and food safety standards. Training sessions and information packages will improve the situation and will convince more and more processors to introduce adequate quality management systems.

- Training of quality auditors: In order to strengthen the food safety system in BiH and to comply with required quality and safety standards, quality auditors need to be educated. They will support the food processors in installing quality management systems and to comply with modern quality and safety standards.

- Training of inspectors: After the reorganization of the inspection services, all inspection services have been merged into entity inspectorates. The inspection system needs to be streamlined according to modern requirements of food safety. Inspectors need to be trained and equipped to fulfill their tasks appropriately.

- Export marketing: Exporters need to know the habits and preferences of their potential customers abroad. Modifications in taste, packaging, etc. might be necessary to attract new customers. The knowledge of consumer preferences is not very widespread among BiH food processors.

- Strengthen links between Institute for Standardization and food processors: The Institute for Standardization is responsible for the development of BiH product standards (BAS standards). The technical committee for food is comprised of mostly academic experts with little practical knowledge. The food industry is not adequately represented.

7.0 SECTOR ASSESSMENT WOOD AND FURNITURE

7.1 GENERAL SECTOR PROFILE

The wood industry is one of the most important sectors in Bosnia and Herzegovina (BiH). There is a long tradition of manufacturing wooden products, and companies in this sector are already present throughout the wood value chain. The sector is currently going through restructuring; both the privatization process of forestry companies and the damage caused by the war have changed the way in which this industry works. As a result of the war, secondary wood processing activities have shrunk. However, many Bosnian companies are currently improving their overall performance, with secondary processing capabilities as their main development focus.

BiH produced higher quality and higher quantities of timber from its logging operations than its surrounding neighbors, Croatia, Serbia and Montenegro, as well as Slovenia. The timber products of BiH are in demand in the international market and the primary processors are forming co-operatives to provide more efficient drying kilns and modern cutting equipment. The largest markets for these producers are Germany and Italy. Bosnian beech is exported as timber, as semi-processed elements for furniture, flooring and terminated furniture.

Bosnian oak, which grows in abundance alongside the Sava River, in the north of the country, is used in high-value furniture, flooring, stair treads, or turned into wooden products, such as rails and even in ornately carved jewelry-boxes. Spruce is used in furniture construction as doweling, in doors, door and window frames, with the waste off-cuts going into toy production and household goods. It does not surprise that more investors are interested in the privatization of this industry than in any other sector. Some companies export as much as 80% of their production. Cheaper materials made from softwoods, such as fir and juniper, are exported as planks and beams to Austria, Italy, Egypt, Israel and Morocco. A woodcarving school exists in Konjic as one of only a few such specialized schools in Europe.

7.1.1 Forests

Forests cover 2.7 million hectares i.e. 52% of BiH territory, mainly deciduous hardwoods and coniferous softwoods. The average annual volume growth of all forests is around 10.5 million m² of the cut wood. The most valuable natural resources are amongst others BiH's oak and beech. The other main varieties of hardwoods are chestnut and Italian oak. Significant potentials for the development of timber industry, the so-called softwood, are provided by spruce, found on higher altitude, and black and white pine trees. The production dropped during the war, since there were no activities in the construction industry, while there was also a global stagnation of the sector. Domestically, wood is used by the furniture manufacturers as well as pulp for paper production.

7.1.2 Wood Processing

Capacities for mechanical and chemical wood processing have been constructed on the basis of the existing raw materials and those capacities exceed the domestic market needs and they are partly export oriented. There are numerous sawmill capacities in BiH that are able to cut around 2.000.000 m² of wood annually.

Considering the fact that many factories for final wood processing are still not working in their full capacity, some were destroyed or partly ruined. Significant quantities of the lumber are being exported.

7.1.3 Furniture, Construction and Paper Industry

A large number of factories produce furniture (bedrooms, living rooms, dining rooms, kitchens, solid wood steamed beech boards). Capacities for furniture production exceed the domestic market needs and great quantities are being exported mostly to: Croatia, Slovenia, Italy, Germany, Serbia, USA, France and England.

There are significant capacities for the production of building carpentry in BiH, as well as various kinds of parquet, floors, wooden wrapping material etc. that are also being exported. Production of cellulose, paper, cardboard manufactured products has been developed in BiH through the chemical processing of wood. The mentioned factories have the capacity for the production of sodium hydroxide and wrapping paper, printing, writing, toilet paper.

The factories are operating with approximately 20% of their capacity. BiH has potentials for the production of 4500 t of newspapers and magazines, 4000 t of books and brochures, 9000 t of various forms, trade books and around 15000 t of labels, printed wrapping papers and other printed items. BiH has significant capacities in lumber industry, intended for the production of goods for foreign markets. The export trend of the lumber industry of BiH has continued in the post-war period, with an orientation toward production and export of higher value-added products.

Because of the increasing scarcity of natural resources, forestry authorities are collaborating with enterprises and international donor projects to accomplish a fair distribution of raw materials and to avoid the destruction of the forests of BiH.

7.1.4 Macroeconomic Data

The wood-processing sector in BiH represents 1/5 of the country's exports, 10% of the GDP and 15% of total employment. Sales and exports of the BiH wood sector have tripled over the past five years, though from a very low base. 60% of wood sector production is exported, of which Furniture represents 25% and lumber represents over 50%. The strategic importance of BiH's wood industry has been internationally recognized and in 2006, the export of wood products and furniture was two times higher than the imports.

Realized wood industry trade in 2006 shows the sector's surplus in international trade. Total export value is increased mainly because of larger export of furniture, lumber woods and joinery. Furniture exports in 2006 were 106 % over imports, which is an inversion of the situation before 2003.

7.1.5 Exports

In 2006, total sales in this sector accumulated to approximately KM 661,579.506. Exports amounted to approximately Euro 340 million. The export growth rate 2006/2005 is 24,2%. Within that, exports of products in a group of wood and wood products (primary and semi-final wood processing) amounted to 69% and exports of final products to 31%, which is similar to last year's figures.

Within the group of exports of wood and wood products, exports of forestry products amounted to 10,7% which is 1,8% more than in 2005. Forestry products had been exported to Italy, Slovenia, Serbia and Montenegro, Austria, Croatia and Egypt.

Lumber wood exports were 40% of total exports, 15% more then in 2005 and 3,5% less in shares in grand total exports compared to 2005. The largest quantity of lumber woods had been exported to Serbia and Montenegro, Croatia, Slovenia, Austria, Germany. In 2006 the export of various kinds of boards had increased by 31% and the joinery by 60% relating to 2005.

The furniture export made up 31% of total exports which, 26,8% more than in 2005. In this group the furniture exports took the largest share. The largest quantity of furniture for dining rooms, bed-rooms, kitchen rooms, chairs and wooden parts were exported to Germany, Belgium, Croatia, France, Slovenia, Italy, Slovakia, Serbia and Montenegro, Great Britain, USA.

TABLE 9. STRUCTURE OF EXPORT PER GROUP PRODUCTS REALIZED IN 2005 AND 2006

Product groups	Value of realized export in BIH (KM)		Realized export in %	
	2005	2006	2005	2006
Forestry products	47,818	70,723.487	8,9	10,7
Cut lumber	231,724	265.786	43,5	40,0
Boards, veneer	31,918	41,826	5,9	6,3
Parquet and other profiled wood	17,909	19,620	3,4	2,9
Joinery	28,928	45,318	5,4	6,9
Total wood and wood products	371,798	458,938	69,0	69,0
Furniture	159,792	202,638	31,0	31,0
Grand total export	532,538	661,579	100,0	100,0

** Source: Foreign Trade Chamber, statistical report, March 2006*

7.1.6 Imports

Import for wood and wood products was 54,8% of total import where the board import was the largest (chipboard, media pan, plywood of 37,3% of total wood industry import and joinery of 5% from total import). If we look at the region, largest board imports were done from: Croatia, Hungary, Slovenia, Austria, Italy, Germany, and Czech Republic. Joinery was imported from Slovenia, Croatia, Serbia and Montenegro, Germany, Italy and Hungary.

The data given above shows that import of furniture, boards and joinery, considered as semi-final and final wood products, made up 87,3% of total wood industry imports of Bosnia and Herzegovina, which is close to 2005.

TABLE 10. IMPORT STRUCTURE REALIZED IN 2005 AND 2006.

Product Groups	Value of realized import in BIH (KM)		Realized import in %	
	2005	2006	2005	2006
Board	74,845.697	81,265.802	33,8	37,3
Joinery	13,845.253	10,995.751	6,2	5,0
Total wood and wood products	123,416.485	119.569.904	55,7	54,8
Furniture	98,126.361	98,149.969	44,3	45,0
Grand total import	221,578.441	217,797.078	100,0	100,0

** Source: Foreign Trade Chamber, statistical report, March 2006*

7.2 METHODOLOGY FOR SECTOR ASSESSMENT WOOD AND FURNITURE

The present trade assessment report for the wood and furniture sector is **focused on export potentials and quality related items of BiH production units**. The quality related issues are separately highlighted in product quality, quality assurance systems and quality management systems applied by the companies. The selection of visited companies has been strongly coordinated with the wood and furniture department of USAID Cluster Competitiveness Activity Project (CCA). The information collection was done through deep interviews with production managers and/or company owners during the visits. (See also Annexes 7 and 8.)

7.3 STANDARDS AND NORMS

To export wood and furniture products to EU countries, most of the customers do not require the implementation of specific EU Norms or standards. Only EUR1 (EUR1 form – proof of the origin of the product) is in some countries requested. In future, a certification of chain of custody will increasingly be a precondition to export massive wood products to certain countries. Currently there is only a limited quantity of FSC (forest Council Stewardship) certified forests in BiH.

Many wood and furniture producing companies still apply JUS Standards and the relevant EU Norms and Standards are in most cases not known and not requested by foreign customers. Those companies who export furniture elements built from massive wood receive clear quality specifications and work orders from their customers. Samples of product are sent to customers and tested and certified in accredited laboratories. Companies, which export board based furniture (melamine covered clipboard, MDF, etc.), use only imported certified supplements and re-export finished and joined products.

Products with destination Croatia must be tested and certified by a Croatian accredited testing laboratory (Euroinspekt-Drvokontrola, Zagreb i Sl.Brod). Whereas products exported to EU countries in most cases do not need any further certification. EU customers do not make it a condition for BiH exporters to be ISO 9001-2000 certified.

The following organizations and Agencies offer certification and testing requested by wood processors. Not all of them are internationally recognized and accredited.

- Euroinspekt-Drvokontrola, Zagreb i Sl.Brod, Croatia;
- Faculty of Forestry in Zagreb, Croatia;
- Civil Engineering Institute, Ljubljana, Slovenia;
- Magistrat der Stadt, Wien, Austria;
- Otto Graf Institut, Stuttgart, Germany;
- Institut für Fenstertechnik (IFT), Rosenheim, Germany;
- Instituto Giordano Qualita al Plurale, Bellaria, Italy;
- COSMOB, Pesaro, Italy;
- Faculty of Forestry in Belgrad, Serbia;
- Institute Kemal Kapetanović, Zenica, BiH;
- Faculty of Mechanical Engineering in Sarajevo, BiH; and
- Internal laboratory of firm Kontinental, Kiseljak, BiH.

The Bosnian Institute of Standardization is weak and the participation of companies in technical committees is limited. So far, only 12 EU standards have been translated (Terminology for timber cut, plywood, doors and windows). In total, 350 EU standards were adopted.

7.4 SUMMARY OF FINDINGS

7.4.1 Potentials

With a share of over 20 percent of the total export of BiH in 2006, worth over 340 million Euros, wood industry exports continue to grow and the sector confirms its importance for the development of BiH economy. This clearly shows that BiH producers are able to reach the quality level demanded by the competitive European market. Although the framework conditions for doing business in BiH are not favorable (high import custom fees, administrative obstacles and time loss), many producers are realizing substantial investments and modernizing their buildings and equipment.

European furniture producers and traders are highly interested in BiH wood industry. The main reason for this development is based in the fact, that labor costs are quite low and the quality of Bosnian beech, oak and fruit wood is internationally recognized.

The demand for wooden products from foreign customers is greater than the production capacity of companies. However, the installed capacity of most producers is not exhausted to the full. As the whole sector is in a process of change and improvement, an increasing number of producers is expanding their production capacity and willing to perform high risk investments.

The favorable geographical location of BIH is a competitive advantage for export oriented wood and furniture producers.

7.4.2 Problems, Obstacles to Trade

7.4.2.1 Raw material purchase

- Because of the quick growth of the wood and furniture sector, almost all interviewed companies have problems to purchase enough raw material during the whole year to meet the increasing demand for massive wood products. Currently the major part of wood products is still in the range of low value-added, causing the annual wood consumption to be relatively high.

- Most BiH wood and furniture producers are operating with **limited financial resources** and they are using a large part of their working capital for investments. The production circle (time span between outgoing payments for raw materials and incoming payments after delivery of products to end customers) can amount to up to 90 – 120 days. The conditions for long-term loans from public banks are not favorable for most of small and medium sized enterprises (high interest rate). Tax refunds also take very long, sometimes up to 6 months. For smaller companies it is still very difficult to get adequate export guarantees. Support by IGA is very useful but nowhere near sufficient. Small companies have a problem with working capital and they are more inclined to use factoring services in order to improve their cash flow.

- Almost all visited companies complain about **administrative obstacles** and **high customs fees** to import spare parts for machinery and supplements for furniture production.

- Another considerable problem is the **difficulty to obtain visa** for the EU and non-EU countries. To be able to participate in international trade fairs or to maintain personal contact to foreign customers, company owners must personally appear at the embassy of the country in question, and accept long waiting periods causing them a loss of time and money.

- The responsibility for the **education of professionals** in wood processing is in the hands of technical faculties of universities. The quality of educated professionals does not meet the **practical** requirements of wood processing enterprises.
- The main problem for companies with highly sophisticated technology is to get highly skilled professionals specialized in programming of computerized machinery (CNC)
- There is a **lack of networking** between companies operating on the same level and which are located close together. Very expensive equipment like **drying kilns** and sophisticated machinery are currently only purchased on an individual basis and therefore **not used to their full capacity,** resulting in very high operating costs.
- Some **product quality problems** have their origin in the implementation of obsolete or inappropriate technology and insufficient technical knowledge about the production of furniture or elements of furniture, especially massive wood products.

7.5 MARKET ACCESS AND MARKETING

Companies that export to markets of EU member countries on a regular basis are usually larger companies, which are also in the majority of cases partially owned by foreign companies. Their foreign owners are actually enabling them to access the foreign markets. A foreign owner usually takes full responsibility for the placement of products of local companies on foreign markets.

Local producers have little information about foreign markets and their main source of information and contacts are international fairs. However, their participation in international fairs is mainly limited to Croatia and Serbia. Only a small number of companies participate in international fairs organized in EU member countries (Hanover Fair, German International Furniture Fair, Cologne). The main reason for this is the high cost of participation.

Small companies in particular, do not spend money on marketing and promotion, and if they do, their budgets for marketing and promotion are very small. They do not perform market research and their outreach activities to customers are very limited. They often wait for their foreign customers / buyers to find them and contact them in order to establish business cooperation. Promotion is limited to the development of product leaflets and brochures. Only large companies invest in the development of videos and media campaigns.

7.6 CONCLUSIONS

7.6.1 Export

There is an evident export potential in the BiH wood processing sector. An increasing number of BiH companies are ready and capable to meet European market demands.

A wide range of value added products is placed on different markets of Balkan and EU Countries. The demand is higher than the production capacity of small and medium sized enterprises.

Certified supplements for furniture production (boards, foil, finishing material, glue, metal fittings etc.) are imported and fulfill EU quality standards.

An increasing number of producers take the risk to invest in state-of-the-art technology to reach European standards, among them a considerable number without experience in wood processing

BiH wood and furniture producers have a competitive advantage in comparison to other South-East European countries because of the favorable geographic location of BiH, the relatively low labor cost and the quantity and high quality of beech, oak, walnut and fruit wood.

7.6.2 Quality

The existing Bosnian wood and furniture testing laboratories do not meet European standards and they are currently not internationally recognized and accredited. Products for the Croatian markets must be tested in Croatia and products for EU markets are tested in different labs in Germany, Switzerland, Austria, Italy, Holland and others.

Most international customers are in direct contact with production companies and provide them with clear product descriptions, drawings and quality related work orders. In general, samples are sent to the customers to be tested in accredited testing laboratories.

There is a serious lack of coordination among BiH quality infrastructure institutions and there is insufficient participation from the part of wood and furniture producers to improve the implementation of EU standards.

EU customers do not require ISO 9001: 2000 certification.

Except in new industrial and computerized furniture factories, measures for environmental protection and work safety are quite basic or non-existent.

Due to the high concentration of international donor activities in the sector, the risk of overlap and duplication is considerable; however, quality issues have not received much attention so far.

As a complementary input from USAID for the wood and furniture sector, the contribution should concentrate on the strengthening and consolidation of BiH quality institutions to increase the active participation of producers in standardization committees and to meet producers' needs relating the implementation of EU standards. This includes capacity building and training.

The scope and focus of the overall possible future interventions of USAID should be on **"linking quality infrastructure to interested companies with export potential"**.

8.0 OVERVIEW OF RELEVANT DONOR ACTIVITIES

8.1 GENERAL EXPORT PROMOTION

EU TA (EU EXPRO) covers most aspects of general trade promotion through providers of business development services EXPRO in close collaboration with MoFTER and Foreign Trade Chamber (as acting Export Promotion Agency). Also offer training of selected SME but focus on business aspects of export preparation, not on standards and quality issues.

8.2 QUALITY INFRASTRUCTURE

EU ITR project on "Transposition and Implementation of technical Regulations" provides assistance only to BiH authorities in areas of product safety and food safety legislation.

EU IPA assistance expected to start in 2008: BAS (national standards body), BATA (accreditation body), Metrology institute are expected to receive technical assistance, maybe some equipment for metrology institute.

Norwegian ISTR Program (International Standards and technical Regulatory Program) offers general awareness seminars on EU standards and legislation and provides assistance to a very limited number of companies (currently four) on quality and technical requirements for exports in selected sectors, including food and wood and furniture sector.

8.3 AGRI/FOOD

8.3.1 USAID LAMP

The **World Bank** is offering support to agri/food producers in three sectors (honey, fruit and vegetables, wine) in 10 municipalities the Herzegovina region. Project will end Dec. 2008. Similar scope of work to LAMP. Good cooperation with LAMP.

CEFA (Italian NGO) offers TA and grants to producers of fruits and vegetables only for organic production.

GTZ (co-financed by Swiss Development Agency- SDC) is promoting "Entrepreneurship in fruit and vegetable Sector in Banja Luka and Tuzla Regions. Project ends in 2007.

SDC through its Swiss Import Promotion Program (SIPPO) is providing production and product quality related support to producers of organic agricultural products and medicinal herbs on a limited scale. Project ends 2007.

8.4 WOOD AND FURNITURE

8.4.1 USAID CCA

GTZ activities on a limited scale (co-financed by Swiss Development Agency).

8.5 FOOD SAFETY

The Swedish International Development Co-operation Agency, **SIDA**, will support BiH in adapting the national food safety system to the international requirements of the European Union and WTO. The Project will have a 4-year duration and cover a multitude of aspects of food safety legislation, institutional set-up and technical infrastructure. ToR are available. Budget 12.5 million SEK, (approx. 1.8 million USD).

EU IPA assistance in the field of food safety: Projects expected for 2008, e.g., Support to implementation and enforcement of the BiH Food Legislation-1,000.000 EUR.

WB project- Agriculture and Rural Development Project in appraisal stage, not yet approved. Foreseen project period: 2007-2011, total amount 33.561.555,00 US$ with local contribution 8.532.312,00 US$.

Excerpt from WB project proposal

The Project Development Objective is to assist BiH to strengthen the capacity of its State-level and Entity-level institutions to deliver more efficient and effective agricultural services and support programs as well as to make a substantial contribution to an acceleration of BiH's eligibility to access support under the European Union Instrument for Pre-Accession Assistance for Rural Development (IPARD).

Key outcome indicators will include:

- Sixty-percent of disease and pest inspections implemented on the basis of expected risks.
- Pluralistic, stakeholder driven and outcome based contracted extension services operational at the level of each Entity and benefiting twenty-percent of commercial farmers.
- One hundred-percent of rural development structural payments made through harmonized, EU IPARD compliant institutions and systems at the level of each Entity.

Key output indicators will include:

- Veterinary Office of BiH implementing effective animal identification system encompassing seventy-percent of cattle, swine and small ruminants.
- Classical Swine Fever (CSF) test and slaughter program established and incidence of brucellosis reduced by thirty-percent.
- Administration of BiH for the Protection of Plant Health implementing plant health monitoring and risk assessment systems.
- Food Safety Agency of BiH implementing a risk based food safety system.
- Entity-level Inspection Directorates are effectively implementing BiH's plant health, animal health and food safety laws and regulations
- Entity-level Agricultural Information Units established and assembling FADN information from 300 farms.

- Entity-level Department for Extension with a multi-stakeholder governing body established and has approved CY2010 Entity extension work plan and budget.
- At least 100 of contracted extension/advisory service providers accredited with specific competencies implementing at least 50 outcome-based extension contracts.
- Entity-level farm and entitlement registries and Paying Systems established and accredited by the World Bank to disburse Project funds.
- EU IPARD compliant rural development plans established and overseen by effective Monitoring Committees.
- Fifty percent of agriculture and rural development funding used for structural payments through a World Bank accredited paying system in each Entity.
- Hundred percent Project funds disbursed according to plan, timely and accurate completion of all annual operating, training and procurements plans.
- Beneficiary surveys indicate fifty percent awareness of Project and overall satisfaction with Project activities.

For further information on food safety related assistance projects see Annex 3.

9.0 SUMMARY OF RECOMMENDATIONS FOR ASSISTANCE

9.1 QUALITY INFRASTRUCTURE

- Link interested companies with export potential in the relevant sectors to quality infrastructure institutions by:
  - Increasing participation in standardization committees; and
  - Improving quality-related know-how and capacity in federations, associations, clusters and similar organizations and link up these organizations with the national quality infrastructure bodies.
- Support national standards body and national metrology institute in reaching out to interested parties in wood and furniture and agri/ food sectors by
  - Customer surveys,
  - Sector-specific information seminars and round-table discussions,
  - Sector-specific standards information services and publications, and
  - Sector-specific courses on implementation and practical application of European and international standards.
- Support national metrology institute in upgrading of national metrology system.

9.2 FOOD SAFETY

- Support authorities in elaboration of Food Safety strategy, including laboratory level.
- Register food business operators and introduce GHP, GMP, GAP and HACCP as a prerequisite for trade to EU.
- Propose upgrades for existing laboratory capacities.
- Support accreditation of selected laboratories.
- Improve operation practices of laboratories.
- Set controls for animal health.
- Improve microbiological testing.
- Develop capacities of the Plant Protection Administration.

- Build capacity - qualification and training of staff.
- Implement and train on HACCP.
- Improve information management and reporting in laboratories.
- Support regional initiatives in food safety related to trade.
- Support the national accreditation body.
- Protect traditional products.
- Support industry (associations) in developing good practices.

9.3 AGRICULTURAL AND FOOD PRODUCTS

- Train SME in quality management practice and implementation of state-of-the-art quality (and environmental) management systems, e.g., GAP, ISO 9001:2000, HACCP, ISO 14001.
- Organize information forums and seminars on ISO 22000 (food safety management systems) for agricultural producers, food processing companies and other organizations in the food chain.
- Support agri/food producers in achieving EurepGAP certification.
- Link agri/ food producers to competent laboratories.

9.4 WOOD AND FURNITURE

- Establish a network of wood and furniture testing labs, wood technology centers (e.g., University faculties) and associations.
- Improve work safety conditions in wood processing units, paying special attention to dust, noise, and personal protective devices.
- Implement environmental protection measures in wood processing units, in particular with regard to:
  - Smoke;
  - Solid residues, especially of chemicals and finishing liquids;
  - Disposal of board-based cut-offs (foil covered clipboard, MDF, plywood); and
  - Unfiltered emission of varnish spray mist.
- Identify and select wood and furniture testing labs to be upgraded for purposes of
  - Export testing to EU and international requirements, and
  - Import testing to domestic product safety requirements.
- Prepare export-oriented testing lab for international accreditation.

10.0 POTENTIAL RISKS IN IMPLEMENTATION OF RECOMMENDED ASSISTANCE

In the area of food safety, far-reaching recommendations are made, with the aim of supporting BiH authorities in reforming the food safety system, selecting a very limited number of analytical laboratories for the implementation of well-defined and clearly allocated food safety tasks and in upgrading these few labs in terms of equipment and competence. The effective implementation of these recommendations requires a strong political will on the part of the relevant authorities – including those at the state level – to place food safety issues high on the political agenda and to put the painful but necessary decisions in the hands of the persons with the power to take them.

In the years 2004 and 2005 new food legislation was adopted and the necessary state institutions to govern a modern food safety and control system were established. However, the process was not continued, the legislation was not enforced and most of the institutions have not become fully operational yet. Thus, many responsibilities and tasks remain in the hands of Entity authorities, whose practice has not necessarily been unified for the whole territory of BiH. However, only a unified food safety and control system can meet EU and international requirements.

Without the political will to make food safety a national priority and without the agreement on a common - Entity-shared – food safety strategy,

- The newly established state institutions may not receive adequate support,
- The new legislation may not be enforced throughout the territory, or
- It may not be possible to carry out the lab selection and to upgrade the right labs.

In the quality infrastructure area, the relevant BiH authorities and institutions have applied for a range of projects under the new EU pre-accession assistance instrument, IPA. At the time of final editing of this report, detailed information on the objectives and activities of the proposed – but not yet approved – projects, from which most probably the standards institute, the metrology institute and the accreditation body will benefit, was not yet available. To avoid duplication and overlap future assistance in this area by USAID should be decided upon after consultation with EU task officers responsible for the relevant IPA projects.

EU IPA: INSTRUMENT FOR PRE-ACCESSION ASSISTANCE[8]

Over time, the EU developed a broad spectrum of external aid programs, which resulted in a complex set of more than thirty different legal instruments. The need to facilitate coherence and improve consistency, to

[8] Source: EU Web site.

achieve better results and a higher impact with the resources available, led the EC to propose a new architecture for external actions, in September 2004. There are six external relations instruments that will apply from 2007 to 2013, including the new Instrument for Pre-accession Assistance (IPA). At the junction between external assistance and internal policies, the IPA intends to facilitate the entry into the Union of candidate countries and potential candidate countries.

Objectives and Scope of IPA

IPA is an accession-driven instrument, fulfilling all the requirements stemming from the accession process, notably in terms of priorities, monitoring and evaluation. IPA will replace the former pre-accession instruments: PHARE, ISPA, SAPARD and CARDS.

To simplify and co-ordinate the delivery of external assistance, the major objective when designing the IPA was to streamline all pre-accession assistance into a single framework and to unite under the same instrument both candidate and potential candidate countries, thus facilitating the transfer from one status to another.

IPA Components

IPA components	eligible recipients
☐ Transition Assistance and Institution Building; ☐ Regional and Cross-Border Co-operation;	potential candidates & candidate countries
☐ Regional Development; ☐ Human Resources Development; ☐ Rural Development.	candidate countries only

Assistance Under the IPA

Assistance to potential candidate countries under the IPA will concentrate on institution building, in particular to strengthen the Copenhagen political criteria, enhance administrative and judicial capacity and encourage some alignment with the Acquis. The IPA regulation also foresees investments to promote economic and social development. Potential candidates will also be able to use institution building to build capacities and ensure that the correct programming and management structures are in place to start their preparation for managing the Structural Funds once they become candidate countries.

All countries in the Western Balkans have already been identified as potential candidates, though in designing the IPA regulation, no assumptions were made as to the date of graduation or accession for any country. The regulation was designed with flexibility, to accommodate such events whenever they occur and following the legal procedures that govern such graduation.

Finally, it should be noted that a number of donors, most notably SIDA and the World Bank, have just begun (SIDA) or are on the verge of (WB) implementing multi-year food safety projects, covering most of the aspects and activities which the Trade Assessment team has mentioned in the context of its recommendations for future USAID assistance. Indeed, the need for assistance in the food safety area is substantial and much TA and costly upgrading of physical equipment will be needed to make the system meet EU and international requirements, leaving ample room for effective interventions by all interested donors. The obvious risks of overlap and duplication should be countered by means of close donor consultations and – where possible – collaboration.

ANNEXES

ANNEX 1: TEAM MEMBERS' ITINERARIES

ITINERARY ALEX INKLAAR

Mission 1

Sunday, 25 March	14:40 Arrival Sarajevo	
Monday, 26 March: SARAJEVO		
11:00	EU ITR	Radomir Marinkovic
12:00	USAID	
14:00	Export Credit Agency (IGA)	Lamija Kozaric, Director
17:00	EC Delegation	Judith Selman, task manager Export promotion
Tuesday, 27 March: SARAJEVO		
09:00	BiH Institute for Standardization	Goran Tesanovic
13:00	BiH Institute for Accreditation	Milos Markovic
15:30	BiH Institute for Metrology	Esad Tuzovic
Wednesday, 28 March: MOSTAR		
	visit to 10th International Economic Fair	
Thursday, 29th March: SARAJEVO		
09:15	Ministry of Foreign Trade and Economic Relations	Zoran Bilbija
10:30	Euro Info Center	Sead Hromic
11:45	Ministry of Foreign Trade and Economic Relations	Fatima.. Dept. Of Export Promotion
15:00	Departure Ralf Rogowski	
15:00	Katica Poljo	
Friday, 30th March		
08:00	Pick-up for company visits outside Sarajevo	
14:30	Ministry of Foreign Trade and Economic Relations	Nenad Pandurovic (Assistant Minister)
16:00	Debrief with USAID and LAMP	
Saturday, 31st March	Desk work	
Sunday, April 1	Departure for Hamburg	

Mission 2

Wednesday 2 May 2007: SARAJEVO		
14:40	Arrive to Sarajevo	
Thursday 3 May 2007: SARAJEVO		
09:00	Meeting with USAID CTO and LAMP CoP	
11:00	Briefings with Christine Fröse, Armin Klöckner	
12:00	Meetings with Katica and Ben	
15:00	GTZ	Mr Goretzki
Friday 4 May: MOSTAR		
11:00	Food Safety Agency Mostar	Mr. Sejad Mackic
	Lab visits Mostar (recommendation by FSA)	
17:00	Depart for Sarajevo	
Saturday 5 May: SARAJEVO		
09:00	Brovis – Visoko	Refik Kurgus
11:00	Faveda	Aida Zubcevic
16:00	meetings with local consultant	Davorin Pavlic
AM	join Armin to Faveda or Brovis?	
Sunday 6 May: SARAJEVO		
12:00	meeting with local consultant Mario Perc	
Monday 7 May: SARAJEVO		
11:00	TÜV Adria	Mara Bokic
16:30	USAID CCA with Thomas Steinsberger	Luksa Soljan
Tuesday 8 May: SARAJEVO/BANJA LUKA		
09:15	Market Surveillance Agency	Lenka Kozic
11:30	Vogosca Municipality	Dzenana Beslija
12:30	Unis Pretis	Hajrudin Skulj
14:00	Cenflex d.o.o.	Ibro Suljovic
15:00	departure for Banja Luka	
Wednesday 9 May: BANJA LUKA		
09:00	Vigmelt - metal sector	Momir Bojanic
11:30	Maxmara - metal sector	Slavko Kovacevic
13:30	Drvoprodex - wood processing	Darko Partalo
15:00	departure for Sarajevo	
Thursday 10 May		
09:00	BiH Institute for Standardization	Goran Tesanovic
11:00	BiH Institute for Metrology	Esad Tuzovic
14:00	BiH Institute for Accreditation (BATA)	Milos Markovic
Friday 11 May		
10:00	EU EXPRO	Enes Aleckovic
	Debrief USAID	
Saturday 12 May		
12:05	Alex Inklaar departs	

Mission 3

Accommodation: Villa Orient, Sarajevo		
Saturday 2 June:		
	13:50 Arrive Sarajevo	
Sunday 3 June:		
	Team briefing and reporting	
Monday 4 June:		
08:30	Foreign Trade Chamber, Sarajevo, (wood sector)	Selma Basagic
Tuesday 5 June		
14:00	University of Sarajevo, mechanical Engineering faculty; reporting	Dr. Izet Horman
Wednesday 6 June		
08:00	Reporting	
19:00	Meeting with Davorin Pavelic	
Thursday 7 June		
08:00	Reporting	
09:00	Telephone conference with USAID CTO	
		Thomas Steinsberger, Benjamin Torec
Friday 8 June		
14:00	Presentation of draft report to USAID and LAMP	
		Inklaar, Thomas Steinsberger
Saturday 09 June:	Reporting	14:30 Depart to Germany

ITINERARY DR. CHRISTINE FRÖSE

Mission 1

Date	Activity
Wednesday, May 2, 2007	• Arrival Sarajevo 15:00 h • Briefing with Alex Inklaar • Meeting with Jon Thiele, Chief of Party, Alex Inklaar
Tuesday, May 3, 2007	• Briefing with Alex Inklaar, Armin Klöckner • Briefing with Katica Poljo • Meeting with Amira Vejzagic-Ramhorst, Dobrila-Boba Vukmanovic, Jon Thiele and team • Meeting with GTZ, Mr Goretzky
Friday, May 4, 2007	• Food Safety Agency, Mostar, Sejad Mackic, Director; Faruk Kaukcija, Laboratory expert • Zavod za Javno zdravstvo Mostar, Institute of Public Health, Dr Edin ColaKovic • Hercon D.O.O. Laboratory, Mostar, Private laboratory, Rafo Beno, Engineer
Saturday, May 5,2007	• BROVIS, Visoko (poultry slaughterhouse) • Faruk Buljusmic, Director • FAVEDA, Sarajevo • (Production of tea, natural cosmetics)
Sunday, May 6, 2007	• Meeting with Marijo Perc (local consultant) • Office
Monday, May 7, 2007	• Kantonalna veterinarska stanica Sarajevo • Cantonal Veterinary Institute, Sarajevo, MSc Lelja Zahirovic, Dr Tidza Muhic Sarac • Institut za geneticki inzenjering (Agricultural Institute • Institute for Genetic Engineering and Biotechnology • (independent institution within the University of Sarajevo), Adaleta Durmic-Pasic, MSc, Head of the laboratory for GMO and food biosafety • Veterinary Faculty, Department of Food Hygiene • University of Sarajevo, Faculty of Veterinary Medicine • Dr Muhamed Smajlovic, Senior Assistant • NRL Fish Diseases • Prof. Dr Adnan Jazic, Department of Aquaculture, Department of Parasitology and Invasive Diseases, University of Sarajevo, Faculty of veterinary Medicine • State Veterinary Office • Sanin Tankovic, State Veterinary Office, Senior Assistant for Veterinary Public Health • EU –Twinning Project " Support to the Veterinary Office BiH" • Dr. Karoline Schollmeyer, Resident Twinning Adviser
Tuesday, May 8, 2007	• Travel to Banjaluca • Pododjel za javno zdravstvo Brcko distrikta • Institute of Public Health, Sub-department of Public Health, Dr Fatima Dedeic, Head of Department; Dr Marija Becirovic, Head of Microbiology
Wednesday, May 9, 2007	• Poljoprivredni institut Banjaluka • Agricultural Institute of RS, Bojan Rajcevic, BSc, Biotechnology • Technoloski fakultet Banjaluka • University of Banjaluka, Faculty of Technology, Prof. Radoslav Grujic, Food Technologies for food of animal origin, Food Science and Food Analysis • Veteirnarski zavod Bihac • Veterinary Institute RS (dairy – quality control milk and foodstuffs microbiology), Alexandra Babic, DVM • Departure to Travnik

Tuesday, May 10, 2007	• Pharmamed, Travnik • Manufacturer of herbal medicines, dietetic products, cosmetics and Dietpharm produces. • Sead Medanhodzic, General Director • Zavod za javno zdravstvo Srednjo bosanskog kantona • Public Health Institute, Sead Karakas, Director • Veterinarska Zavod Zenica • Veterinary Institute • Meeting with the Director of the Food Safety Agency
Friday, May 11, 2007	• Meeting with Sabaheta Cutuk, Deputy Director, Plant Protection Administration • Meeting with Amira Vejzagic-Ramhorst, Boba Dobrila Vukmanovic, Jon Thiele and team
Sat, May 12, 2007	• Meeting Alex Inklaar, Thomas Steinsbeger • Travel back to Germany

Mission 2

Fri, June 1, 2007	Travel day Arrival 15.30 h at the Lamp Office • Meeting with Ben Toric
Saturday, June 2, 2007	• Meeting with Sejad Mackic, Faruk Kaukcija, Food Safety Agency • Office, Report writing and team meeting
Sunday, June 2, 2007	• Office, Report writing and team meeting
Monday, June 3, 2007	• Briefing with Dobrila-Boba Vukmanovic, Jon Thiele and team • Meeting with Vesna Grkovic, EC Delegation to BiH, Task Manager
Tuesday, June 4, 2007	• Office, Report writing Travel back to Germany 15.30 h

ITINERARY THOMAS STEINSBERGER

Mission 1

Monday 7 May		
08:00	Briefing with Alex Inklaar at LAMP office	
11:00	TÜV Adria	Mara Bokic
16:30	USAID CCA	Luksa Soljan
Tuesday 8 May		
08:00		
12:15	CARLLATO, Nova Bila	Dragan Gazibaic
14:30	KESTEN, Vitez	Nikola Kesten
Accommodation: Villa Orient, Sarajevo		
Wednesday 9 May:		
09:30	USAID CCA	Luksa Soljan
10:15	SECOM	Sanin Hasanic
14:15	Nord ent doo	
Thursday 10 May		
09:00	BiH Institute for Standardization	Goran Tesanovic
11:00	BiH Institute for Metrology	Esad Tuzovic
14:00	BiH Institute for Accreditation (BATA)	Milos Markovic
Friday 11 May:		
10:00	Foreign Trade Chamber	Enes Aleckovic
12:00	Intermediate meeting Chief of Party	Mr. John
14:30	Debrief USAID	Ms. Amira
Saturday 12 May:		
09:00	Team meeting planning 2nd week	
Monday 14 May:		
10:00	RAMEX doo.	Ramiz Hajdareviae
13:30	Kunjuh Zivinice (5 different solid wood ent.)	Ms. Katica Tadic
Tuesday 15 May		
08:00	Departs to Vitez and Bosanski Petrovac.	
10:30	Firma FIS	Hasan Eikmi
14:30	OMDA	Haric Omeragic
Accommodation: Hotel in Bihac		
Wednesday 16 May		
08:30	Sani Global	Emir Kadiric
12:00	Smrca	Emir Mujic, Zahidm Mujic
14:00	Una Om	Olga Blatevic
16:00	HNK	
Accommodation: Hotel in Bihac		

Thursday 17 May		
09:00	LASER	Dzemaludin Harcevic
11:00	Debrief USAID	Luksa Soljan
Friday 18 May: SARAJEVO		
10:00	Dallas	Dipl: Ing. Mas. Elvir Hajrovic

Mission 2

Friday 1 June:		
10:50	Depart to Sarajevo	
14:30	Briefing, USAID-LAMP, report writing	John Thiele
Saturday 2 June:		
09:00	Report writing	
Sunday 3 June:		
10:00	report writing	
Monday 4 June:		
08:30	Foreign Trade Chamber, Sarajevo, (wood sector)	Selma Basagic
Tuesday 5 June		
14:00	University of Sarajevo, mechanical Engineering faculty, report writing	Ph.D Izet Horman
Wednesday 6 June		
08:00	Report writing	
19:00	meeting with Davorin Pavlec	
Thursday 7 June		
08:00	Report writing	
09:00	Phone conference with Amira	Amira, Katica, John Thile, Alex Inklaar
		Thomas Steinsberger, Benjamin Torec
14:00	Presentation of key findings and recommendations to USAID and LAMP	
Saturday 09 June:		6:50 AM depart to Germany

ITINERARY ARMIN KLÖCKNER

Mission 1

Wednesday, May 2, 2007	Travel day Arrival Sarajevo 21:20 hours
Thursday, May 3, 2007	• Briefing with Alex Inklaar, Christine Fröse • Meeting with Amira Vejzagic-Ramhorst, Boba Dobrila Vukmanovic, Jon Thiele • KLAS, Sarajevo (bakery, berries, tea)
Friday, May 4, 2007	• LAKS, Mostar (fish farm) • VEXTRA, Mostar (tea, tinctures) • VEGIC COMMERCE, Ljubuski (fresh fruits and vegetables)
Saturday, May 5,2007	• BROVIS, Visoko (poultry slaughterhouse) • FAVEDA, Sarajevo (tea, natural cosmetics)
Sunday, May 6, 2007	• Meeting with Marijo Perc (local consultant) • Travel to Banja Luka
Monday, May 7, 2007	• PRIJEDORCANKA, Prijedor (fruit and vegetable processing - semi finished products) • DANUBE FOODS GROUP, Banja Luka (dairy products) • TROPIC, Banja Luka (fish farm and processing)
Tuesday, May 8, 2007	• MUSHROOM, Celinac (mushrooms, wild berries) • VEGAFRUIT, Gracanica (fruit and vegetable processing - final products)
Wednesday, May 9, 2007	• BRAJLOVIC, Sarajevo (meat processing) • ORGANSKA KONTROLA, Sarajevo (organic certifier) Travel back to Germany

Mission 2

Monday, May 28, 2007	Travel day Arrival Sarajevo 21:20 hours
Tuesday, May 29, 2007	• Briefing with Katica Poljo and Jon Thiele • Reporting
Wednesday, May 30, 2007	• Karoline Schollmeyer, Resident Twinning Advisor at the BiH State Veterinary Office • Sabaheta Cutuk, Deputy Director of the BiH Administration for Plant Health • Reporting
Thursday, May 31, 2007	• Reporting Travel back to Germany

ANNEX 2: FOOD SAFETY AND EXPORT REQUIREMENTS TO EU

FOOD SAFETY AND EXPORT REQUIREMENTS TO EU

Requirements for import to EU of certain products will be explained further in order to understand institutional and organizational requirements to be fulfilled by government and FBO (Food Business Operators).

EU import rules

EU import rules for foodstuffs seek to guarantee that all imports fulfill the same high standards as products from the EU Member States, with respect to hygiene and consumer safety and, if relevant, also to the animal health status. The same standards of food safety apply to all products regardless of origin. Under the EU food law compliance or equivalence is regulated in Article 11 of Regulation (EC) No 178/2002. Food imported into the Community for placing on the market within the Community shall comply with:

- The relevant requirements of food law, or
- Conditions recognized by the Community to be **at least equivalent** thereto, or
- Where a specific agreement exists between the Community and the exporting country, with requirements contained therein.

Regulation (EC) No 853/2004 of the EU (part of the so-called hygiene package, see below) is laying down specific hygiene rules for food of animal origin (for some of the specific requirements see below). With regard to food of animal origin, in most cases only products from establishments (including factory and freezer vessels) that appear on a list approved by the Community can export to the EU. The competent authorities (CA) in the Member States have to ensure that foodstuffs imported into the Community were submitted to official controls for the purpose of ensuring that the relevant provisions of the food hygiene rules, including the requirement of putting in place, implementing and maintaining HACCP-based procedures were observed (Directive 93/43/EEC on food hygiene).

The new EU rules on food hygiene confirm that all food businesses after primary production must put in place, implement and maintain a procedure based on the HACCP principles. These rules are however more flexible than the old system, as the HACCP based procedures can be adapted to all situations. It has to be borne in mind that in addition to food hygiene requirements, other sanitary measures may apply such as animal health and plant health requirements. Where appropriate, this Regulation (EC) No 882/2004 authorizes the Commission to request third countries to provide accurate and up-to-date information on their sanitary and phytosanitary regulations, control procedures and risk assessment procedures with regard to products exported to the EU.

Importing live animals and animal products into the EU

Products of animal origin

For approval/authorization of export for products of animal origin Members States (and third countries) have to analyze food samples from animal origin for residues of veterinary medicine and environmental contaminants (Council Directive 96/23/EC; see above).

For products of animal origin, EU food law requires that the competent authority of the exporting country offers guarantees as to the compliance or equivalence with EU requirements.

The competent authorities in the exporting third country ensure that their control services comply with the operational criteria laid down in EC law, in particular in Regulation (EC) No 882/2004. Furthermore

- . The establishments authorized to export to the EU should comply and continue to comply with the EC requirements and the list of such establishments should be kept up-to-date and communicated to the Commission.
- The certification requirements are satisfied. Detailed rules with regard to certification are laid down in Council Directive 96/93/EC on the certification of animals and animal products. Further details are laid down, e.g. that the certificate must be issued before the consignment to which it relates leaves the control of the competent authority or the third country of dispatch.

In most cases animal products imported into the EU must originate from a country that is approved to export that category of product to the EU. To become approved the FVO must visit the non-EU country and its establishments to check whether hygiene standards are equivalent to those in the EU, and the competent authority in the despatching non-EU country needs to contact the European Commission (EC) to request approval. Following successful approval, a Commission Decision (CD) is drawn up, giving the format for health certification and a list of approved establishments. Further guidance on the approval procedure for non-EU countries is available, reference is given to EC guidance for third country authorities on the procedures to be followed when importing live animals and animal products into the EU.[9]

Fishery products and bivalve mollusks

EU legislation lays down conditions for the import of **fishery products and bivalve mollusks**. Each consignment for import must:

- come from an EU-authorized exporting country and be accompanied by appropriate signed health certification
- come from EU-approved fishery product premises or approved bivalve mollusk production areas
- enter the EU through an officially designated Border Inspection Post where veterinary/hygiene checks are carried out by an Official Fish Inspector
- Public Health conditions for the production and placing on the market of fishery products and bivalve mollusks are laid down in Council Regulation 852/2004 on the hygiene of foodstuffs and Council Regulation 853/2004 laying down specific hygiene rules for food of animal origin.

Some authorized exporting countries are only allowed to export either fishery products or bivalve mollusks. HACCP by fish farms is mandatory and implementation of Good Aqua Cultural Practice is recommended (FAO guideline).

Fishery products caught in their natural environment may have to be handled for bleeding, heading, gutting and the removal of fins. They are then chilled, frozen or processed and/or wrapped/packaged on board vessels in accordance with the rules laid down by the regulation.

[9] See (www.ec.europa.eu/food/fvo/pdf/guide_thirdcountries_en.pdf) and general guidance on EU import and transit rules for live animals and animal products from third countries. (www.ec.europa.eu/food/fs/inspections/special_topics/guide_thirdcountries_en.pdf).

Specific hygiene requirements cover the following elements:

- Hygiene on board fishing vessels, factory vessels and freezer vessels: cleanliness, protection from any form of contamination, washing with water and cold treatment;
- Conditions of hygiene during and after the landing of fishery products: protection against any form of contamination, equipment used, auction and wholesale markets;
- Fresh and frozen products, mechanically separated fish flesh, endo-parasites harmful to human health (visual examination), and cooked crustaceans and mollusks;
- Processed fishery products;
- Health standards applicable to fishery equipment and facilities on fishing vessels, factory vessels and freezer vessels: areas for receiving products taken on board, work and storage areas, refrigeration and freezing installations, pumping of waste and disinfection;
- Products: evaluation of the presence of substances and toxins harmful to human health; and
- Wrapping, packaging, storage and transport of fishery products.

Meat, poultry, wild game

Each batch (or consignment) of **meat, poultry or wild game** must:

- Come from a country approved to export that type of product to the EU
- Be accompanied by animal health and public health certification
- Come from EU-approved premises
- Enter the EU through a Border Inspection Post where veterinary checks must be carried out

General Member State regulations will also apply.

Import restrictions due to avian (bird) flu can also be applied.

Specific hygiene provisions cover the following elements:

- Training of hunters in health and hygiene;
- Killing, evisceration and transport of wild game to an approved establishment;
- Game handling establishments.

Cheese, under milk and milk products

There are strict rules about importing **dairy products** from outside the European Union (EU).

Each batch (or consignment) of dairy products for import must:

- Have a veterinary and/or public health certificate,
- Come from an EU approved premises,
- Enter the EU through a BIP where veterinary checks must be carried out, or
- Come from a country authorized by the European Commission to export this type of product to the EU.

There may also apply national general regulations.[10] Rules about products containing dairy products will depend on the percentage of the product they make up.

The new hygiene package regulates for instance different specific health requirements. As regards primary production of raw milk, the specific health requirements are as follows:

Raw milk must come from females of the species (cows, buffaloes, ewes, goats, other), which are in a good general state of health and, in particular, free of animal diseases such as tuberculosis and brucellosis. Raw milk from animals, which fail to satisfy all the requirements, must undergo specific treatment.

Subject to further, more specific provisions, raw milk must comply with microbiological criteria and standards for plate count and somatic cell count. Milking, collection and transport of raw milk must comply with clearly-defined hygiene rules in order to avoid any contamination. The same applies to persons involved, premises, equipment and utensils used in production.

The Regulation sets out the general hygiene requirements for heat-treated drinking milk and other milk products, dealing mainly with the preparation of pasteurized milk, Ultra High Temperature (UHT) milk and sterilized milk.

Where appropriate, special conditions may be granted by the competent authority to take account of traditional production methods. Wrapping and packaging must be designed to protect milk and/or milk products from harmful effects of external origin. For control purposes, the labeling must clearly show the characteristics of the product, including where applicable the terms "raw milk" or "made with raw milk", the nature and date of treatment, and the storage temperature.

Honey

There are strict rules about importing **honey**, and products containing these. Each batch (or consignment) of honey for import must:

- Come from a country approved to export this type of product to the EU
- Come from an establishment registered by the competent authority of the exporting country
- Be accompanied by a commercial document
- Enter the EU through a Border Inspection Post where veterinary checks must be carried out

Imports of honey are only permitted from certain countries.

Importing food of non-animal origin into the EU

Products of non-animal origin

With regard to food of non-animal origin, it is in many cases sufficient that exporting establishments in third countries are known to and accepted as suppliers by importers of food into the Community. For trade to EU HACCP is mandatory except for primary production (see above).

Import procedures related to food hygiene

When importing food of non-animal origin, it is incumbent upon the importer to ensure compliance with the relevant requirements of food law or with conditions recognized equivalent thereto by the Community.

[10] Dairy products include milk, butter, cheese (including vegetarian cheese), yogurt, cream, milk powder, whey, lactose, lacto proteins (including caseins and caseinates), anhydrous milk fat or kefir.

Food of non-animal origin may be submitted to controls in accordance with a control plan drawn up in the light of potential risks (EC No 882/2004). Such controls must take place in accordance with national law in the different Member States. This may be at the point of entry, the point of release for free circulation, the importer's premises, retail outlets etc.

Apart from food hygiene, these import controls may also cover other food safety issues such as: additives, materials in contact with food, contaminants etc.

Certain food commodities of non-animal origin need to be presented at a designated point for being submitted to checks.

Generally, food of non-animal origin:

- Can enter the EU without certification by the competent authorities of the third country of dispatch, and
- Is not subjected to a pre-notification procedure on arrival.

Fruits and vegetables

All **fruit and vegetable** imports to EU must follow national **law of the EU Member State on issues such as pesticides and labeling**.[11]

Many fruit and vegetables must meet European marketing standards to be imported into EU countries. By planning to import fresh fruit or vegetables application of a 'Certificate of Conformity' under the PEACH system is required i.e. by DEFRA, UK (see their website). Some plants and plant products are prohibited from entering countries. Others are restricted and must be accompanied by a phytosanitary (plant health) certificate, which is issued by the Plant Health Authority in the exporting country. These measures exist to prevent the introduction into, and spread within, the EC of serious pests and diseases of plants and plant produce (including fruit). They apply to plants and plant produce brought into the Member States from countries outside the European Community for personal use or with the intention of being made available for sale. Potatoes and potato seeds can carry pests and diseases, so there are strict rules about importing them into the UK from non-EU countries i.e. lettuce and spinach can contain nitrates, which can be harmful at high levels. There are maximum levels of nitrates set by the European Commission, so imported vegetables must make comply with these rules.

Limits for pesticide residues are also given for tea.

Tea, herbs

General quality parameters for **dried herbs** are (i.e. based on the requirements of the German food and feed law):

- Identity (according to indicated species);
- Purity (97 up to >99%, due to species);
- Organoleptic characteristics (color, odor, size, etc.);
- Moisture content, Microbiological analysis (total plate count of bacteria);
- Residues (pesticides, aflatoxine, heavy metals etc.); and
- Homogeneous and stable quality is required.

[11] There are also rules that relate specifically to particular types of fruit or vegetable, e.g. by UK required applying for a Certificate of Conformity, plants and plant products, potatoes, lettuce and spinach, wonder Bean Lupinus Albus, Kaffir lime and other citrus fruit leaves.

Very important for the EU market are the residues. It is generally known that products from the Balkans have quality problems in terms of microbiological contamination and with pests. This is caused by the way of collecting and processing herbs. Products thus have to be degerminated and disinfested at the place of import. However, EU market accepts only certain and a few methods and substances, i.e. steam sterilization for degermination or CO2 fumigation under pressure for disinfection. As a rule of thumb those technologies do not exist in the country of origin (i.e. BiH). Therefore, it is from utmost importance for industry to produce right form the start a hygienic and safe product by applying Good Agricultural and Collection Practice (GAP).

The buyers will test for the safety of the product while their own analysis will help to control the process of production. The importer will send representative samples to potential buyers.

Import procedures related to plant health - plant health requirements

Before they can be introduced into the Community, certain plants, plant products or other objects must comply with phytosanitary requirements. Certain plants and plant products (listed in Directive 2000/29/EC) must be accompanied by a phytosanitary certificate, issued by the **National Plant Protection Organization** of the exporting country. Upon entry into the Community, the phytosanitary certificate may be replaced by a plant passport (for those imported plants, plant products or other objects).

These plants and plant products are subjected to compulsory plant health, identity and documentary checks with a view to ensuring compliance with the EC's general and specific import requirements, before being released for circulation within the Community. Such checks could take place at specified entry points situated at the outer border of the Community or in the case of identity and plant health checks also at places of destination inside the Community when meeting special conditions. The importers of such goods should be registered by the responsible official authorities of the Member State. Airport authorities, harbor authorities or either importers or operators, as arranged by them, shall give as soon as they are aware of the imminent arrival of consignments of relevant plants or plant products advance notice to the customs office of the point of entry and to the responsible official authorities. Member States may also apply this latter provision to cases of land transport, in particular where the arrival is expected outside the normal working hours of the relevant official bodies.[12]

Bakery products

Bakery products include cakes, pastries, sweet pies and chocolate can contain small amounts of products of animal origin, such as eggs, milk, butter or suet. They may be treated as products of animal origin when they are imported if they have high levels of dairy products and have not undergone sufficient heat treatment or if they are not ambient stable.

Sweets that contain high levels of dairy products (for example Indian sweets) are also considered to be products of animal origin when imported. This means that each batch you import may need to:

- Have a veterinary and/or public health certificate;
- Come from EU approved premises;
- Enter the EU through a Border Inspection Post (BIP) where veterinary checks must be carried out; or
- Come from a country authorized by the EC to export this type of product to the EU.

[12] For more information, see: http://europa.eu.int/comm/food/plant

Examples of Indian sweets that may be considered products of animal origin are i.e. halvah or halva. Rules about products will depend on what percentage is dairy. These products are also likely to be subject to licensing requirements to protect animal health.

ANNEX 3: PROJECTS IN THE AREA OF FOOD SAFETY AND LABORATORIES

The following projects are supporting the establishment of a modern food control system in BiH in different components:

1. **EU Twinning Project "Support to the State Veterinary Office"** (June 2006 – June 2008)

The Project has tasks in strengthening capacities of the SVO to improve its functional organization and enhance the performance of core administrative, coordination and inspectorial tasks by:

- definition of strategy and policies for the sector in particular with regard to EU harmonization and integration
- increase abilities of SVO to carry out countrywide coordination and monitoring policies to review the impact of existing support policies and further development of inter-governmental coordination, in particular with food safety, plant health and lower level veterinary administration
- to empower SVO to implement recommendations of the EC Food and Veterinary Office and meet conditions for an export of animals and animal products by 2007.

The project progresses with activities in capacity building and functional organization and is providing support to the legislation, the veterinary inspections, the definition of relevant complementary agencies, the establishment of the State Reference Laboratory (ies) and selecting establishment for export (poultry farm, pig farm).

The project adapts to currents shortfalls and provided i.e. currently training for laboratory personal on PCR technique or diagnostic for classical swine fever in Germany. The project will advise on further activities in the sector. The Project is currently screening potential export companies in the sector for supporting them (meat and poultry production) with consultancy, training etc.

2. **FAO project TCP/BiH/3101 "Strengthening Capacity on Aquaculture Health Management"** (July 2006 –February 2008)

The FAO Project just recently started and will support the SVO in aquatic health management. The aim is to support sustainable and healthy aquaculture production in BiH that will enable the country to improve the values and efficiency of the production and by implementation of international standards of health and food safety to fulfill general and specific requirements for international trade, especially to EU. The Project further assists the laboratory for viral investigations to obtain accreditation through upgrading capacities for aquatic animal health management. For further reading see the Project proposal.

3. **USAID Lamp**

The Project supported the National Reference Laboratory (NRL) on fish diseases with virology equipment and training and is helping to develop the application of HACCP by fish farms. They also gave support to FBO and government in different food sectors. USAID/Lamp has published market profiles and competitiveness inventory reports, volume I, II and II, subsector analysis in 2004 covering beef and veal sector, dairy, honey, mushrooms, processed vegetables, snails, swine, wine etc.).

4. **ITR EU Project on Technical Assistance for the Transposition and Implementation of Technical Regulations** (started 30.1.06 – 30.7.07)

Specific objectives of the project are to develop the capacity for legal drafting and implementation of the technical regulations in MoFTER, including the Food Safety Agency, and to provide technical assistance in transposition of priority technical regulations in compliance with corresponding EU New Approach Directives and supporting the establishment of an enquiry and notification point that meets EU and WTO requirements, and developing the capacity of the Institute for Industrial Standards to operate it. Transposition and implementation of EU Old Approach Directives support to the Food Safety Agency in becoming fully

able to realize its mandate in this regard. The project is currently underway transposing 18 BiH Technical Regulations and supporting the FSA in adoption 31 BiH Technical Regulations.

5. FAO regional project TCP/RER/3002 on "Strengthening food safety in South East European transition countries – A regional approach to food legislation and control (2005-2007)

The Project is helping developing a food safety strategy and action plan in eight SEE countries. For BiH there is a preliminary draft plan on food safety. The FSA is not participating in the project since they have been established later.

World Bank

The bank financed some assessment visits in 2005. One has been on plant protection products. Findings and recommendations where the following: The Authority of Plant Health Protection is responsible for pesticide residues in products of plant origin (setting legislation, enforcement of MRLs -Maximum Residue Limits- and reporting of results - The Law on phytopharmaceuticals). It has been recommended that tasks and responsibilities of the Authority should be further clarified on the basis of secondary legislation. Additional staff should be appointed to assist in preparing legislation on pesticide residues. The adoption of EU MRLs has first priority and it has been strongly recommended that the residue laboratory of the Public Health Institute in Mostar should be further assisted for increasing the number of pesticides analyzed. At a later stage, this laboratory, or the one in Sarajevo should be further supported for acquisition of specialized equipment, such as HPLC and training on EU quality control procedures for pesticide residue control should be provided to the analysts.

Further assistance to be provided has been evaluated as:

- Training on EU procedure for MRLs setting
- Training on EU requirements for pesticide residue monitoring in products of plant origin
- Training on risk assessment/risk management for pesticide residues
- Training on multi-residue methods of analysis and quality control procedures for pesticide residues analysis.

The PPA is still not fully functional; secondary legislation is missing. Additional staff for supporting the deputy director in drafting secondary legislation has been appointed; pieces of legislation are drafted but have not passed parliament yet.

GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit), Germany is supporting QM trainings in BiH. One of their former staff, trained as a quality manger is now the head of TÜV in BiH. In general there are not many HACCP consultants on the market providing consultancy.

Planned future activities are by:

- **Sida/Swedac/Swedish National Food Administration** assessed the regulatory and quality infrastructure for food safety and quality in BiH in 2003. There is a follow-up project planned with activities in the area of accreditation and laboratories, amongst others. For more information reference is given to the report "Regulatory and quality infrastructure development for food safety and quality in the Balkans" from 2003
- **EU Instrument for Pre-Accession Assistance Rural Development (IPARD)** under the desk of Agriculture, Natural Resources and Economic Reform, portfolio for 2007 (starting 2008) with activities in:

  A) Trade, export promotion

Continuation of the ongoing ITR project (1.7 million EUR, 2 years), beneficiaries are the MoFTER and line ministries, with three components in:

- Legal advice: transposition of directives, guides for exporters, limited training for private sector; conformity assessment and market surveillance
- Support to the Institute of Metrology
  - Supply for laboratories
  - Technical Assistance for legal advice and training (1 million EUR)
- Support to the Institute of Accreditation
  - Legal advice, training of laboratories (1 million EUR)

B) Agriculture, rural development

- Ongoing project in agriculture/rural development
- EU SESMARD (Support to the Establishment of a State Ministry of Agriculture and Rural Development), until March 2008, continuation unlikely, 1 million EUR
- See also 'The Functional Review of the Agricultural Sector in BiH 2004 (www.delbih.ec.europa.eu/en/reviews/Agriculture_report).
- Instrument for Pre-Accession Assistance (IPA) portfolio for 2007 (starting 2008):
- Implementation of the BiH Food Law (1 million EUR)
  - Technical assistance, laboratories, risk management; eventually procurement for laboratories (1 million EUR), dependent on World Bank assistance
- Pilot Measures in Rural Development
  - Implementation according to IPARD requirements, local action groups
  - Implementation in cooperation with upcoming World Bank agricultural project
- Support to Agricultural Information Systems (1.5 million EUR)

IPA 2008 could eventually include support to the BiH Administration for Plant Protection (condition to staffing and further functioning of the administration). Ongoing support to the State Veterinary Office depends on the recommendations of the EU Twinning project. Equipping the laboratories will be postponed and is not foreseen by the 2007 budget.

The World bank has planned, besides other support measures, to support the Food Safety Agency 2007-2011 with technical assistance. EU and World bank will both support the State Veterinary Office and the Food Safety Agency in institution building and technical assistance. Activities will comprise developing a database, establishing the risk analysis process, training for inspectors, sampling, food analysis laboratory upgrading, finalizing animal identification. The planning matrix for support to the FSA by World bank is available. EU and World bank will coordinate their activities to not overlap.

Needs of the private sector with regard to quality assurance/ management:

- Awareness of food safety standards and CE marking
- Training of companies in obtaining quality standards.

ANNEX 4: ORGANIZATION OF THE SERVICE AND ORGANIZATION OF TESTS

ORGANIZATION OF THE SERVICE AND ORGANIZATION OF TESTS

The Service in food control is organized between ministries of health, agriculture and trade.

Inspectorates, CA involved in official control of food and feed in BiH are:

- National Veterinary Service (SVO); operating monitoring programs (i.e. Directive 96/23/EC on measures to monitor certain substances and residues thereof in live animals and animal; draft a national residue monitoring plan for fisheries and aquacultures, wild game, honey etc.); designation of NRL
- Plant Health Protection Administration, established but not fully operational;
- Agricultural Inspection, Field Inspection and Seed Control with laboratories for pesticide residue analysis under IPH i.e.
- Entity level Veterinary Service (NVS)
- Entity level Sanitary Inspection/Service
- District Brcko veterinary and sanitary service.

Veterinary Service

There are authorized laboratories designated by Entity Ministry of Agriculture and reference laboratories designated by State Council of Minister (authorized veterinary diagnostic laboratories - OJ BH 16/05).

Laboratory Testing for the National Services

List of authorized veterinary laboratories

1. Veterinary Institute of the Veterinary faculty Sarajevo – 5 Departments
2. Veterinary Institute Banja Luka - 3 Departments plus one small branch office in Bjeljina
3. Veterinary laboratory Mostar
4. Veterinary laboratory Tuzla
5. Veterinary laboratory Zenica
6. Veterinary laboratory Bijeljina
7. Veterinary laboratory Bihae
9. Veterinary laboratory of Cantonal Veterinary Station Sarajevo

Three National Reference Laboratories (NRL) are authorized according to a BiH-decision for 12 elected diseases:

1. Veterinary Institute of Veterinary Faculty Sarajevo (S) representing 7 NRL
2. Veterinary Institute "Dr. Vaso Butozan" in Banja Luka (BL) representing 5 NRL
3. Veterinary Institute Mostar (M) representing 2 NRL.

Veterinary laboratories provide diagnostic services for animal health and food of animal origin. Each of the laboratories is equipped for microbiology control, quality control and ELISA (Enzyme Linked Immunosorbent Assay) technique. Techniques like GC (Gas Chromatography), HPLC (High Performance Liquid Chromatography), AAS (Atomic Absorption Spectroscopy), PCR (Polymerize Chain Reaction) are applied at the Institute of Veterinary Faculty of Sarajevo, Department of Food Hygiene only, where qualitative and quantitative residues analysis is conducted. The department is testing also for animal products and feeds. The Veterinary Institute Banja Luka acquired modern analytical equipment for milk control.

During the visits it became evident that veterinary laboratories do not only test for food of animal origin but also for food of non-animal origin while sanitary laboratories test for products of animal origin besides testing of processed food. Some laboratories reported on reorganization of their testing scope recently, i.e. control for animal products has been reallocated from the IPH Mostar to the veterinary service Mostar.

National Veterinary Service (NVS)

The National Veterinary Service has its main office in Sarajevo. The office is coordinating the laboratory network for the monitoring program. A National Residue Plan is compiled by the CVO. Sampling and laboratory work is financed by a state budget. For the implementation of the plan the SVO and all laboratories within the network have put forward a proposal for better staffing, funding and equipping of all eight laboratories (2,5 Mio KM). The chain of command for NRLs is from the CVO to the state veterinary administration at the NRL and Border Inspection Posts (BIP). Regional Laboratories are authorized by the entities. At the SVO, there is only on staff responsible for the residue monitoring program.

The state veterinary service, for the first time this year, has successfully organized sampling and testing for the residue monitoring nationwide.

Milk is being tested at the Veterinary Institute of Banja Luka, RS within the department of Quality control and milk. The Institute has obtained some new equipment for milk testing like Foss machines (Bactosan Foss) and is testing raw milk on total counts and colonies (numbers) as well as on somatic cells and contents of fat, protein, lactose, tray content and freezing point (Combi Foss: Milkoscan FT 600 and Fossomatic FC) for milk industry. Reference milk comes from the Faculty of Zagreb, Croatia. The milk industry receives information on a daily basis electronically.

Three National Reference Laboratories (NRLs) are authorized according to a BiH-decision for 12 elected diseases (see above; for more reading reference is given to the Taiex report on Veterinary Service). A sampling/work plan is established by the CVO. For each sample of the 12 elected diseases, the state of BiH is paying a fixed sum to the NRLs.

Fisheries and Aquaculture Animal Health Laboratories

There are six laboratories approved by the SVO to perform test for fish diseases. The Center for Fish Disease (CFD) at the Veterinary Faculty of Sarajevo has been chosen as the NRL. All the six laboratories can perform ELISA tests of suspect of clinical cases but none of them has the capacity for virus isolation. Thus samples are send to the Community Reference Laboratory (CRL) in Arhus, Denmark for diagnostic purpose which had some problems in the past with receiving results in time and shipments. Besides the Cantonal Veterinary laboratory Sarajevo (BATA accredited), none of the approved laboratories are accredited so far.

Public Health Laboratories

Seven laboratories haven been approved to carry out official bacteriological analysis and eight to carry out official residue analysis. Bacteriological analysis is carried out in water and Fishery Products (FP) of establishments. Analysis for Listeria is not carried out since BIH legislation has no provision for official

analysis of Listeria (as of 2005). The NRL has been recently equipped by USAID/Lamp and will be further supported by FAO in establishing testing capacities in virology.

Institutes for Public Health (IPH)

They are responsible for the control of sanitary conditions in food production and comprise:

1. Cantonal Institute for Public Health Sarajevo
2. Cantonal Institute for Public Health Zeniea
3. Cantonal Institute for Public Health Bihac
4. Cantonal Institute for Public Health Tuzla
5. Cantonal Institute for Public Health Mostar
6. Federal Institute for Public Health Sarajevo
7. Federal Institute for Public Health Mostar
8. Institute for Public Health of RS Banja Luka - control of sanitary conditions of production in RS.

Institutes of Public Health are in charge for sanitary hygiene. Most of the IPH operate laboratories under their hygiene department with a sanitary chemistry and a microbiological section (clinical microbiology). Sanitary chemical testing covers quality control of food and hydrology, safety of drinking water and waste water. Microbiological testing covers control of food, drinking water and swaps. The department controls sanitary and hygiene conditions of FBO, retail, restaurants etc. by over-viewing their sanitary minimum requirements, taking also samples of foodstuff and swaps. Some are testing for bio residues, but not at the same level as veterinary laboratories.

Inspection and testing is done in accordance to old standards on health correctness; there is a rule book for any commodity to test. In terms of microbiological testing, foodstuffs are tested for Sulfite reductase, clostridia, E.coli, Salmonella, total plate count yeast/moulds, and staphylococcus aureus. Super analysis is done at federal level for the purpose of controlling the results of analysis from the other IPH laboratories. For this purpose the laboratories are better equipped and experienced and selected by the State Council of Minister. The system refers to the old Yugoslav legislation (Book of rules of methods for performing microbiological analyses and super analyses of the foodstuffs" (Regulation BH No. 2/92, 13 and 14/94 as part of the tasks under public health in BiH). The approach is not risk based, testing is on all parameters to be paid by the food industry. The same analysis has to be conducted if goods are imported from BiH to Serbia i.e. on the charges of the importer. Reportedly, IPH at federal is testing for heavy metals, additives and pesticide residues in foodstuffs. Public health institutes at federal level were not visited; further information has to be obtained. The institutes at entity level carry out basic test on food quality mainly, such as for food on energy/calorie content of sugar, nitrate, nitrite, proteins, ash, additives and artificial colors etc. and for water on conductivity, temperatures, pH etc. For analysis no international standards are used. Visited laboratories at entity level were not testing for heavy metals or pesticides.

Phytosanitary Inspection, Seeds - Agricultural Institutes

Not covered by visits; at the end of the assessment a visit was paid to the National Service for Plant Protection (NSPP), which has been recently established and has to link its laboratories. The report of LAMP on "Current status of phytosanitary issues in BiH and future developments is summarizing the situation and is, as confirmed by the Deputy Director of the PPA, still actual to its major statements.

Private Laboratories

There are private laboratories in BiH providing service to industry and official control (i.e. Herkon in Mostar to the Agricultural Inspectorate at the border) while other private laboratories want to offer their services to official control in order to use their state-of-the-art equipment most economically. Under the assessment two private laboratories were visited. The private laboratories are accredited in accordance to ISO 17025 (BATA) or are in process of doing so. None of the visited laboratories take part in proficiency tests. The methods are accredited by BATA standards. The laboratory of Pharmamed in Travnik (teas, pharmaceuticals) is very well equipped and the only laboratory seen so far using traceable testing equipment (calibration service from Germany). They are also willing to offer 24 h operation.

A trend for establishing private in-house laboratories by bigger food industry has been evaluated, i.e. Brovis in Visoko (poultry) is in the process establishing their own in-house laboratory. They have also a state-of-the-art rendering plant, now offering service to the public. Some private laboratories mentioned that there is demand by industry for testing of pesticides for EurepGAP certification and that they want to start testing for pesticides.

Mandatory Tests

Each agency/body has testing requirements according to the old (and new) legislation. Laboratories do private testing on request. Laboratories of universities and private laboratories take part in official control. The Intuitional set-up inflicts upon laboratories; there is no clear planning on inspection and sampling. The inspectors decide on samples case wise and send them to the laboratories for testing in accordance to the old Yugoslav legislation. Thus laboratories can only test what inspectors assign for testing and since the inspectors send sample to different laboratories it diffuses the laboratory capacity with no optimal use of available capacities**.** Some laboratories are starting to specialize, like the GMO laboratory in RS at the agricultural faculty, but they cannot optimize their operation since testing for GMO is required by industry for export only and not covered by legislation. Thus their service in this part goes strictly to the industry.

Regional laboratories are not supervised by central laboratory and there is no service for ring testing. FBO are required to pay for the analysis and/or examination of samples, taken by inspectors, as part of their activities in the official control of Food or of Animal Feeds. They are further compelled to take out a contract to submit a certain number of samples to an official laboratory, in addition to those that are taken by inspectors as a part of their inspections. Inspectorates (at entity level) contract FBO for their services in accordance to old Yugoslavian law. The food control system applied in BiH is to the burden of the FBO. They pay twice and even if they ship goods in another entity they are subject to another testing. Only monitoring programs are paid by the state. Some laboratories do testing for industry upon request paid by them according to price lists. Income from private tests goes to the state.

Levels of transfer of information of laboratories are not satisfactory. This in turn means that there is no assurance that the Agency for Food Safety will obtain fast and secure information for risk management. Reporting lines and indicators for reporting have to be defined under a risk-based approach.

Testing Scope

Microbiology – most applied methods (as evaluated so far) are swaps; and basic testing for 6 pathogens (such as for Sulfite reductase, clostridia, E.coli, Salmonella, total plate count yeast/moulds, and staphylococcus aureus). Super analysis is done at federal level.

Chemistry – most applied methods are testing for food quality mainly, such as on energy/calorie; content of sugar, nitrate, nitrite, proteins, ash, additives and artificial colors etc. and for water on conductivity, temperatures, pH etc. For analysis only national and no international standards are used. Visited laboratories at entity level were not testing for heavy metals or pesticides.

Pesticide Residues (not evaluated in detail)

Monitoring program on residues by animal products (seven reference laboratories) screening; confirmation outside of BiH partially.

Sensory testing, only at the Faculty of Technology and Science in Banja Luka

Labeling - Agricultural Inspectorate

Market surveillance organized so far is not based on statistic figures and risks. Research capacities were not evaluated. The FSA has to consider in future laboratory capacities for testing of new food products. There are no capacities so far on testing for materials in contact with food, radiation etc. Results from national testing programs are sent to the relevant directorate under Ministries of agriculture, health and trade. Reporting at the international level goes to OIE and EU.

ANNEX 5: COMMENTS ON KEY ISSUES

Testing scope, Outdated Methods

Methods are dependent on/oriented towards equipment currently available in laboratories and based on old legislation. The legislation is with respect to MRL, microbiological testing, pesticides etc. not always according to international standard, thus cannot satisfy trade requirements.

Especially for analysis of samples and confirmation tests equipment is not adequate (residue control: i.e. lack of HPLC - High Performance Liquid Chromatography, GC (Gas Chromatography) MS (mass spectrometry); microbiology: i.e. molecular techniques are rarely applied). Written technical instructions and methods (Standard Operating Procedures -SOPs) should be at hand to ensure continuous and uniform application of laboratory methods. There is a need to adapt new methods, i.e. multi-residue methods for pesticides.

EU Requirement for Testing

Laboratories have to adapt to new methodology as required for export, in particular in microbiological testing. For further reading see the report recently being drafted under preparation funds for IPARD by EU (. A list on equipment to be purchased under EU funds is proposed and available. Equipping of laboratories by EU will be postponed and not allocated under IPA 2007 funds until laboratories are selected and a laboratory strategy is in place (information by EC desk manager on agriculture; postponed delivery relates to administrative issues since the budget 2007 foresees no technical assistance for equipping). In fact the delayed equipping has administrative reasons since tendering for equipment cannot be conducted under the 2007 funds. World bank foresees also funds for laboratory upgrading under their 21 Mio loan, which is currently in negotiation process. It has been agreed between World bank and EU that there will be no overlap in their activities and that World bank may be in charge for the physical upgrading of selected laboratories.

A need of equipment for testing metallic contaminants, determination of residues for veterinary substances, for aflatoxin, organ phosphorus and organ chlorine and mycotoxins has been evaluated by an EU assessment. The missing equipment will not be supplied before 2009. The testing equipment will support residue testing in foodstuffs. The Veterinary Twinning Project has evaluated e need for better equipment at NRLs both for microbiology and chemical analysis residue control. They further suggest developing laboratory activities in current food hygiene and animal hygiene hazards (i.e. brucella, tuberculosis, leucosis, trichinella etc.).

The FSA is drafting a list of current applied methods (limits) and will compare the list with EU requirements (recommendation of the mission).

Microbiological Testing

It is a finding of this assessment that microbiological issues have not been addressed enough by former assessments. The testing on hygiene is considered as an important aspect to upgrade BIH capacity in this respect in order to fulfill new EU trading requirements on hygiene.

Within PHI, there is no separation between food microbiology and clinical microbiology, thus, any result tested so far cannot be accepted. A clear separation of the two sections will have high cost implication and a discussion has to be started which departments will be renovated and which not along with a decision taken on the network of laboratories. In District Brcko there will be a renovation of the department at the hospital for separation of food microbiology next while they already renovated and quipped the chemical department up to a high level including safety and security aspects. The application of QA in most of the visited laboratories is far below what is state-of-the-art. This is related to the use of standardized media for MB control; in one laboratory (Banjaluca, Veterinary Institute of RS) cross-contamination was observed (contact of sterile media with contaminated plates). It is still common practice by some of the laboratories visited to sterilize media and used plates (waste) by one autoclave.

Testing is mainly done in accordance to old Yugoslav law from 1991 on some six bacterias (1g/1 ml), while new requirements on MB testing by the hygiene package, such as i.e. for Listeria monocytes (required for testing of fish, raw milk cheese etc.) is not applied while not required by the legislation. In general the laboratories are operating old style, not in accordance to new trends and none of the staff has been trained on new topics for long. It is still common practice to wait what inspectors brings for testing thus laboratories cannot plan their testing well and in advance.

The recently conducted laboratory assessment by the EU Twinning project on veterinary service (only veterinarian laboratories) observed deficiencies in routine hygiene performance, such as on cleaning and disinfection, protective clothing, authorization etc. Clean benches are not widely used and in some MB sections plants/flowers are observed as well as a carpet in the microbiological section. Control of infectious waste needs to be improved. Separation of „black/white"areas are necessary (i.e. rooms for lunch and coffee were not clearly separated from laboratories). Insecurity level (BSL) 2 requirements are not fulfilled (i.e. walls, ceilings, tables etc. not appropriate to BSL 2).

Underutilization of Equipment

Some equipment has been supplied by Projects (EU, GTZ, USAID) but has been under used for various reasons (big incubator at the Veterinary Institute of RS, Banja Luka, PCR at the Veterinary faculty, institute of public health i.e.). Some items require expensive kits and consumables that have not been provided under local budgets (for example virology equipment at the NRL, PCR at the Veterinary Faculty). Some equipment has been purchased but has been never used or is no longer used due to change of policy (see above). There is also spare capacity in many laboratories, for example most laboratories are capable of testing many more samples than they actually receive. Improvements could be made by better planning of official sampling so laboratories know in advance how many samples will be received at a particular time, further the laboratories would profit if there is a clear direction on what they have to test.

Security and Safety Issues

Security and safety standards are, in many cases, not up to European standards. Fire safety is a major problem. Bio-safety standards are very variable. Many laboratories were using dangerous centrifuges that do not comply with EU safety standards. Gas bottles are not always chained.

Condition of the Laboratories, Layout of Laboratories (rooms)

A number of laboratories were found to be suffering severely from lack of investment in maintenance and renovation over many years. Many are severely sub-standard with deteriorating internal and external structural problems, poor surfaces, and are in such a poor state that it is impossible to carry out even the simplest of tests with any expectation of obtaining meaningful results (IPH). Some laboratories were attempting bacteriological cultures in rooms that would cause heavy contamination. There is also a severe lack of equipment (i.e. on autoclaves). Important and relevant safety deficiencies were seen in the layout of laboratories used.

Quality Management (QM), Quality Assurance (QA)

QM procedures were (with the exception of some areas of work) rarely in place. None of the visited laboratories is taking part in proficiency tests, also none of the private visited laboratories so far. Some laboratories send samples to EU reference laboratories for confirmation of results (Denmark, Slovenia). Immediate implementation of QM measures for all laboratory tests is indispensable. QM manager have to be appointed in selected laboratory in charge for strengthening management and operation of the laboratories. One key observation concerns working practices: laboratories have been upgraded with new equipment and

some with facilities, and training has been provided in the use of equipment, but working practices have not changed. During the visits no control charts were observed as well as any calculation on measurement uncertainty.

Exchange of test material between BiH laboratories is not carried out. Standards were found to be variable with regard to methods in use. In many cases this was the result of lack of updated equipment or training.

Reporting

Books for result entry are commonly used in most of the laboratories, seldom automated system, such as LIMS system

There is no unified reporting scheme; many laboratories have to improve their organization by establishing a sample reception and storage facilities. Reporting has to be improved by using unified schemes and electronically data management systems.

Training

Most visited laboratories have no annual training plan in place, which is an important part of any management system. Some laboratory staff received training under EU initiatives, such as by Tempus projects or Twinning Projects while others laboratory staff is in education process and cannot work full force (i.e. at IPH in RS). The EU Twinning Project "Support to the State Veterinary Office" is organizing intern shipment to Germany for staff to be trained in PCR technique and animal health diagnostic. There is no directed training planning bridging deficits and developing required capacities accordingly. However, training on new equipment and methods is preferred over training in QM. Training for new equipment is not enough. Trainings are not developed strategically by the CA in charge.

National Reference Laboratories (NRL)

The number of NRL, their funding and operation should be addressed under a laboratory strategy. The legal basis for their operation has to be in place and budget lines assigned. The decision concerning NRL for animal health seems to be practically not in force. The legal basis of laboratories is partly based on legislation of the entities and on legal grounds of former Yugoslavia. For more information on NRL (SVO) see the Taiex questionnaire where they are summarized. The concept and structure of NRL for BiH has to be discussed under an overall concept on laboratories again considering budget requirements, requirements on staff, equipment and legal requirements. A co-ordination between SVO, FSA and the laboratories to determine tasks, resources and strategies of NRL is necessary. There should not be too many NRL.

So far the chain of command for laboratories between SVO and the laboratories is not clear (except residue control in the frame of the National Residue Control plan). Organizations charts of NRL are not reflecting the current situation (i.e. performance of residue controls in BL in the department of serology). Reportedly, there are not enough NRL for all list A diseases. The diagnostic laboratory of the NRL on fish diagnostic at the Faculty of Veterinary Medicine was not working during the visit and will start virology diagnostic earliest end of 2007. So far, BiH has no reference laboratory for control of foodstuffs. Only the NRL on fish diagnostic is linked to a CRL, while links to EU CRL are not established yet, i.e. for residues of animal origin.

Remark: Any outside assigned laboratory activity has to be covered by the management system and is required by accreditation (contract, over viewing results etc.).

Animal Health, Fish Sector

The knowledge of fish diagnostic /virology within the laboratory network and by the NRL has to be enhanced. There is no law on fish health in BiH. Legislation has to be in place in order to control all streams (zoning of streams/fish farms; none registered fish farms). Trade between fish farms cannot be controlled so far, in particular if there are unregistered farms. The capacity of the SVO for aquaculture is not enough (staff missing). Feed has to be approved and controlled not contain animal protein. Implementation and control of good aquacultural practice is emphasized as well as tracing and tracking.

Animal identification and movement control are not working as wished in BiH. EU approved slaughterhouses (and rendering plants) are requirements for export approval.

Authorization and Funding; Control, Overview, Measures, Chain of Command

The BiH laboratory structure is inherited from the old Yugoslav system. The laboratories are state-owned (university, institutes), financed by the state with some money allocation. The different inspectorates are each associated with their own networks of laboratories. This organization has resulted in mainly two parallel structures of testing under different ministries with no central reporting scheme. There is no supervision of both networks. T Industry has to pay for the uncoordinated control, sometimes twice. he laboratories work in accordance to the old Yugoslav structure for control of health correctness of food or sanitary control and mostly comply with old Yugoslav regulations on food safety and quality. So far laboratories for official control are designated at national and entity level by different ministries.

There is no coordination of food control by a competent authority in BiH. Inspection activities are at several levels and between different ministries. This has resulted in gaps and overlaps in inspection. Even within the Veterinary service there is no chain of command.

The National Veterinary Service operates (animal health) reference laboratories while there is the concept of super analysis under the MoH. This kind of analysis is used to verify testing by laboratories at national level. This approach of control by the MoH seems no longer acceptable since it is not risk-based. Instead supervision and confirmation of results should be taken by a NRL on foodstuffs. In general, testing in BiH has no risk based approach. None of the laboratories visited so far, except the Cantonal Veterinary laboratory in Sarajevo has a management system in place or is applying quality assurance while only a few laboratories are conducting specialized testing (trade requirement).

NRL have an important role in coordinating and supervising of BiH laboratories in future (new food law). Currently, there are some animal health NRLs and NRLs for residue analysis under the SVO. The NRL are missing a clear legal basis and a budget for their activities. Reportedly, NRL have budget problems since budget for testing is with the entity level inflicting on the capacities of NRL. The establishment of the layer of NRL depends mostly on financing and thus the concept has to be addressed under a policy and requires a sound legal basis. EU requires no NRL from 3rd countries.

The new laboratory system for BiH has to be implemented under economic aspects. The reduction of the livestock population and the introduction of new testing programs mean that there is now a need to streamline laboratory testing facilities in order to make best use of expensive equipment and avoid duplication of effort. BiH should have an efficient and functional network of local and regional official food control laboratories testing for official control. BiH is a relative small country; for a country with 3.8 millions inhabitants 40 laboratories within official control diffuses the laboratory capacity. There are no arguments to have too many food laboratories when they are performing basically the same type of analysis on foodstuffs. Furthermore a critical number of staff in a laboratory is required in order to maintain specific knowledge. The laboratory capacity for BIH should be planned also for supporting producers self control since not all exporters have their own laboratories.

ANNEX 6: CRITERIA FOR DECISION TAKING ON LABORATORIES

Criteria for decision taking on laboratories:

- Their number and location should be in relation to objectives and volume of work; effective cost coverage of analysis is required
- Laboratories require considerable capital investment and they are expensive to maintain
- Adequate facilities for physical, microbiological and chemical analysis are required
- Effective and reliable performance from utmost importance; results as consequence of equipment used, skills and qualification of personnel and methods used
- Introduction of Quality Assurance Programs, validated method and accreditation of laboratories
- Usage of official methods of sampling and analysis
- Calculate sample amount in order to make a laboratory profitable and calculate how many samples to be evaluated under reform (mid. long
- Two tier system, conformation and coordination by NRL; plan the set-up economically
- Proposal for NRL, not too many NRL, create a network covering pesticides for plant products, monitoring, health etc.
- Issuance of plant health and animal health certificates based on diagnostic
- Set MRL and develop capacity for pesticide residue testing and control
- Align and new legislation at entity level to new law requirements; abolish old JUS standards or adopt then to new EU requirements
- Separate clearly what foodstuff is being tested under MoH and what under MAF or reform the inspection system (one inspectorate),
- Support for industry under HACCP and specific testing
- Link to EU reference laboratories for participation in ring testing
- Define laboratories for testing for pesticides, environmental contaminants and veterinary medicines
- To build on existing capacities secure appropriate mechanisms of public financing, supervision and monitoring. Present staff expertise and skills, upgraded to comply with international developments and standards – training plans
- NRL develop proficiency test, list of methods, support measures etc.
- Training in accreditation procedures; project on accreditation; plan for accreditation short -, medium – and long term
- Training in new diagnostic procedures such as molecular biology; multi-residue methods etc.
- Trainings for QA, such as measurement uncertainty, control charts etc.
- Enforcement of continuing education and advanced training should be implemented in routine laboratory work.
- Feed control
- Select laboratories based on defined criteria like, competent staff, good management, facilities etc.

ANNEX 7: SECTOR ASSESSMENT WOOD AND FURNITURE COMPANIES VISITED

In addition to the visits, during the Mostar Trade Fair end of March 2007, 14 companies were interviewed by questionnaire and 8 more were interviewed by phone. Five companies refused to give information. Summaries of findings are attached in the ANNEX to this report.

To get an representative overview of the BiH wood and furniture sector, during the first mission (06.05.07 – 21.05.07) the visited companies were selected by following criteria:

- Small, medium and big sized companies
- Product range (massive wood furniture, board based furniture, elements for furniture, parquet)
- Export activities
- Manufacturers and industrial producers
- Quality assurance and quality management systems applied

In total were visited 15 companies in four different cantons: Sarajevo, Tuzlanski, Srednjo Bosanski and Una Sana. All visited companies were selected by the wood and furniture department of USAID-CCA project.

TABLE 7-1. DISTRIBUTION OF COMPANIES ACCORDING TO ASSESSMENT CRITERIA

ASSESSMENT CRITERIA	VARIABLE	DISTRIBUTION
Size of companies	Small sized	3
	Medium sized	**6**
	Big sized	4
Product range	**Massive wood products**	**5**
	Combined massive wood and board based products	3
	Board based products	4
	Upholstered furniture	3
	Elements for furniture & parquet	5
Export activities	Export only to neighboring countries	2
	Export to neighboring countries and EU	**7**
	Export only to EU and USA	5
Kind of production	Manufacture	2
	Manufacture and serial/industrial production	5
	Industrial production	**6**
Quality related issues	ISO 9000-2000 certified	3
	Apply internal quality assurance system	4
	Quality instructions provided by customer	**6**

Apart from the company visits, the following wood and furniture sector relevant institutions were visited.

- Foreign Trade Chamber of Bosnia and Herzegovina (Industrial and International Relations Department)
- USAID-CCA (Cluster Competitiveness Activity)

BiH quality Institutions

- National Accreditation Body: BATA
- National Metrology Institute
- National Standards Body: BAS
- TÜV adria/TÜV Thüringen
- University of Sarajevo, mechanical engineering faculty

KEY FINDINGS PER COMPANY

The following tables describe the key findings per visited companies during the mission between 06.05.2007 and 21.05.2007. The findings contain:

- Main products, annual raw material consumption
- Export activities, What, how much and where to exported
- Implemented quality assurance and management systems
- Main bottlenecks and problems
- Future planning

CARLLATO: Sarajevska 20/b, 72276 Nova Bila, Travnik, BIH

Director: Dragan Gazibaric

Small Enterprise, 20 Employees

Core activities & general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of flexible plywood mattress support frames** • Between 500 m³ and 600 m³ annual wood consumption • Two shift production	• **Export to EU** (Germany, France, UK) • Range of products and technical issues are developed with Slovenian partner company	• **In process of ISO 9000-2000 certification** • Processes are controlled • Employees are trained to realize visible quality control • Certified supplements (glue and foil) are imported • Examples of product has been sent to customer and are tested in accredited Laboratory • Quality Standards are predetermined by customers • One employee is responsible for quality assurance	• Pressing unit is too small and not efficient enough • work safety does not fulfill international standards	• New production building is almost finished • Implement second production line to attend increasing demand of product • Slowly modernization of technical equipment

KESTEN d.o.o.: PC´96, 72250 Vitez, BIH

Produktion Manager: Dipl.Ing.Zarko Zec, Mr. Nikola Kesten, owner

Medium sized enterprise, 80 Employees

Core activities & general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Industrial serial production of MDF* modular kitchen furniture** • Low price segment (kitchen furniture) • Kitchen modules are packet in parts and ready for assembling by customers or KESTEN staff • **Manufactured Upholstered home and office furniture** • The whole kitchen production is in process of modernization	• Production for national and neighboring **Balkan countries (Croatia, Macedonia, Serbia,)** • Because of the type of product, the simple quality and the high competition in this field, exporting to EU is not business	• **No quality management system implemented** • Processes are controlled and in parts documented • Employees are trained to realize visible quality control • All raw materials for kitchen production (agglomerated boards, MDF boards, glue, foil and supplements) are imported and Certified • Customers do not require further quality certification • Quality of product correspond to price segment • ISO Certification is not planned	• Productivity of existing used and imported machinery for the kitchen production is limited to 40 units daily • Implemented technology is obsolete and highly prone to breaking down • High score of production interruption and time lost because of missing spare parts and still standing machinery • High cost of imported technology and spare parts • Quality problems in some processes of the production due to used machinery	• New building for upholstered furniture production will be finished within the next two month • Implementing second kitchen production line to attend increasing demand of product • Implementing of new computerized production lines (WEINIG) to improve the kitchen production up to 100 units per day • Expect end of 2007 its full production capacity

SECOM:

Medium sized enterprise 50 Employees

Core activities & general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of steamed solid beech wood boards** • Between 15000 m³ and 20000 m³ annual wood consumption • Two shift production • Company realize the complete added value chain • (From log to final product)	• **Export to EU (99% to Germany)**	• **Company currently not need to be certified ISO 9000-2000** • Key processes are identified and controlled • Employees are trained to realize quality control • DIN-ISO Certified glue is imported from Germany (KLEBERIT) • product has been tested in accredited laboratory in Germany • Quality standards are predetermined by customers • Production manager is finishing his Master in Quality management • Company applies its own designed quality assurance system	• Purchase of raw material during the whole year • FSC Certification of beech wood and chain of custody will be requested by EU customers • Work safety not fulfill international standards	• New building for finger joint production line is almost finished • Installation of new • technical equipment for finger joint production is in process • strong reduction of rests from the board production using finger joint technology • Implementation of documentation to calculate productivity and profitability • Improve Quality assurance system • Will recruit 20 employees for finger joint unit

NORD ENT d.o.o.: Bukva Tesaj, BIH

Small sized enterprise 30 Employees

Core activities & General information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Manufacture of high end quality solid wood furniture for home, and public buildings (bars, restaurants, shops, Hotels, offices)** • wide range of products • Between ?? m^3 and ?? m^3 annual wood consumption • Two shift production • Use of oak, beech, walnut and different fruit wood • market leader, no competition • 30% belongs to a Dutch company (pilat&pilat)	• 100% of production for export • **Export to Germany, Spain, Netherlands, UK, Japan, USA, UAE)** • In process to patent own designed furniture	• **Ready for ISO 9000-2000 certification** • One person is responsible for quality assurance and management • All Processes are controlled and documented • Employees are trained to realize visible quality control • Certified supplements (glue, finishing products are imported • Products for Croatian markets are tested in Slavonsky Brod (EURO INSPECT) • Prototypes of each product where sent to customer to be tested in accredited Laboratories • Quality requirements are predetermined by customers • 9 employees have certification for internal audits (2 shift foreman, 6 management staff)	• Continually purchase of high quality raw material • Administrative obstacles by importing spare parts from EU	• 4000^2 were bought for steaming unit ant air drying of row material • Increase the network with sub suppliers (Stainless steel and other iron products) • Slowly modernization of technical equipment

RAMEX: Gojakovici bb, 75280 Kladanj, BIH

Director: Ramiz Hajdarevic

Medium sized Enterprise 80 Employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of steamed beech solid wood finger joint boards for IKEA.** • Completed value added chain (from lumber to final product) • **Pallets for export to Austria** • Between 13.000 m³ and 15.000 m³ annual wood consumption • Two shift production	• **Export to EU and non EU countries through IKEA distribution system** • Product line are predetermined by IKEA international • Austrian customer for pallets	• **Applying IKEA product and process quality standards** • Processes are controlled • Employees are trained to realize visible quality control • Certified supplements as glue, metal supplements and finishing material (biological oil) are imported and purchased from IKEA • IKEA requires legally national documentation for raw material • One employee is responsible for quality assurance	• Continue purchase of raw material during the whole year • Administrative obstacles to obtain visa for EU countries for fair participation or direct contact to international customers	• Partner company bought closed public furniture production unit to rehabilitate parts of machinery and implement new technology for massive wood chair production • Upcoming production line for national and international markets • Slowly modernization of technical equipment

KONJUH: Pionirska 10, 75270 Zivinice, BIH

Marketing Director: Mr.Oec. Katica Tadic

Big sized Enterprise 1.200 Employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Serial production of home dinning room furniture in massive wood and veneered boards furniture** • Completed value added chain (from lumber to final product) • Form pressed chairs sits for school equipment • 35.000m³ annual wood consumption (solid wood and veneer) • Two shift production • Own design and design provided by international customers	• **Export to 20 different countries** • 35% for local market • 65% for export • 18% of production for ex Yugoslavian countries (Croatia, Montenegro, Serbia) • 20 % of production for French markets • Pressed elements are for the French market • Beech heard wood products for determinate d German markets	• **ISO 90001-2000 certified** • Processes are controlled and documented • High productivity of raw material due wide range of products (all rests are used) • Products for local markets and Neighboring countries are tested in Croatia • Products for national markets requires only a guarantee letter • International customers from EU or other countries send clear drawings and quality instructions • Samples of new products for export to EU are delivered to customer to be tested and certified in accredited labs • Supplements as glue and finishing materials are imported and certified • For the German markets implementing ecological finishing materials	• Limited installed capacity to guarantee production on time with high quality • Find enough special raw material (Red heard beech)for the German market • Apply s only minimum standard of work safety (Dust aspiration) • Very low attention about environment protection	• Implement required environmental standards • Slowly modernization of technical equipment • optimization of productivity

FIS d.o.o.: 72250 Vitez, BIH

Big sized Enterprise 206 Employees (Only the new production line was visited)

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **One of the biggest department store of BIH, mainly for mid and low price level** • Importer of any kind of articles • Competitive advantage because of retail shops in all over BIH, Croatia and Austria • **Recently built up full computerized production line for melamine covered board furniture (home and public institutions** • Between 4.500 and 5.000 product units Two shift production	• **Mainly exports to Croatia** • Small units are exported to Austria and Serbia • Austrian customer for pallets	• **Receive in June of 2007 ISO 9000-2000 audit** • Processes are controlled and documented • Employees are trained to follow integrated quality assurance system • Certified supplements as clipboards, glue, metal supplements and melamine are imported • Croatian market requires product testing in Slavonsky brod lab (EUROINSPECT) • Apply s EU standards regarding work safety and environmental protection • One employee is responsible for quality management	• High BIH customs fees on imported raw material • State institutions and ministries does not create favorable conditions reducing taxes for wood and furniture producers	• Developing strategy to export to EU • Planned to implement new production line for massive wood furniture production • Complete implementation of very high sophisticated technical equipment • Connecting to Project EU EXPRO/Foreign trade chamber

OMDA d.o.o. & Cherry d.o.o.: Ul. Gaj, 7???? Bosanski Petrovac, BIH

General Manager: Dipl. Pravnik Omeragic Haric

Medium-sized Enterprise (?) Employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of low quality doors covered with melamine soft board** • **Production of steamed beech elements for beds** • own sawmill • Able to produce massive wood furniture • 15.000 m³ annual wood consumption • Two shift production • Garden furniture elements in spruce wood	• 80% of sawmill production for **Croatian** market • 20% of sawmill products for **Albanian** market • Beech elements for **German, Holland and Austrian** markets	• **In beech wood elements production line, quality assurance system is applied** • **Company use YUS standards** • Deficits in product quality of solid wood furniture because of partly obsolete technology and insufficient skilled personal • EU customer send quality requirements and give clear instructions for producer • Beech elements are tested in EU accredited labs	• Lack of production planning • Unstable focusing of kind of product • Demand of beech wood is three times higher as from forestry authority permitted • Only 40% of productivity due of non appropriate employed technology • Working capital has been used for investments • Long production circle • Lack of demand of massive wood furniture	7 There is no defined future planning by the owner

SANI GLOBAL d.o.o.: Mrezniacka bb, Naselje Kamenica 77000 Bihac, BIH

Director: Emir Kadiric

Small-sized Enterprise 25 Employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of patented Multi board for strong workbenches** • Completed value added chain (from lumber to final product) • Beech wood elements for beds • Small production of stairways, chairs and tables • Expect 11.000 m³ annual wood consumption • Two shift production	• Biggest company of patented Multi board for **German** market (3D Group) • Elements for Beds are mainly exported to Germany (Bachmann)	• **Internal quality assurance system applied** • German customers provide drawings and specified work order • Employ 10 more people	• Long time to obtain construction permit for new production building • Raw material purchase during the whole year • Demand is bigger as current production capacity	• Bought complete pre-fabricated production hall in Germany • Bought used WEINIG finger joint line • Increase productivity with new organized production line • Capacity of new line will reach up to 5 – 8 m³ in one shift

SMRCA: Trg, Avde Cuka 31, 77240 Bosanska Krupa, BIH

Contacted person: Emir Mujic, Zahidm Mujic

Medium-sized Enterprise 40 Employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of steamed beech solid wood elements for chairs** • Completed value added chain (from lumber to final product) • Some furniture for domestic market • Between 8.000 m³ and 9.000 m³ annual wood consumption • one shift production • 90% beech and 10 % other kind of wood (oak, cherry)	• **Export beech wood elements for chair production to Italy** • Working with 10 Italian customers • Small quantity of products are exported to **Germany and Austria** • Some furniture for local market	• **Since March 2007 ISO 9001-2000 certified by ICN (International Certification Network)** • Receive precise work order from customer • Five employees are responsible for Quality management and quality assurance systems and accredited for internal audits	• Continue purchase of raw material during the whole year • Administrative obstacles to obtain visa for EU countries for fair participation or direct contact to international customers	• Expand to complete chair production, not only elements • Implement one part of company for furniture production • Increase productivity of raw material from 45% to 60%

UNA – OM d.o.o.: Radnicka bb, 77240 Bosanska Krupa, BIH

Director: Olga Blatevic

Medium-sized Enterprise 60 Employees (privatized company)

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Primary and secondary wood processing** • **beech wood element production** • **steamed beech parquet** (800m² in one shift) • From forestry authority titled for 6.500m³ annual wood consumption • 12.000 m³ total wood consumption • Two shift production	• **Beech parquet is exported to neighboring countries** • Market is already open for parquet • Sawmill products for chair production in Italy • **Export waste wood (wood wool) to Italy**	• **Applying Italian classification for parquet (I and II)** • Interested in implement third quality • **In process of preparation for ISO 9001-2000 certification** • Processes are partly controlled • Some employees are trained to realize visible quality control	• Have to buy raw material in RS • Production cycle is too long (60 – 80 days • Secure raw material supply to guarantee production • Not able to sign serious contracts with Italian customers because of difficult raw material supply • Drying capacity (700m³) not meets production capacity of sawmill	• Company bought closed public furniture production unit to be rehabilitated in parts • Implement new technology for massive wood chair production

LASER d.o.o.: Ljubijankieg 12, 77000 Bihac, BIH

Director: Dzemaludin Harcevic

Large-sized Enterprise 140 Employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **High sophisti-cated full computerized production of several quality series for kitchen, bathroom and wardrobe furniture** • Production of board furniture and public institutions interiors • Clipboard series combined with other materials (glass, stainless steel) • Use of melamine covered clipboard and other materials (Korean)	• High quality wardrobe line for domestic market • One Bathroom program for export to **Serbia, Slovenia, Croatia and Holland** • Two bathroom programs for export to **Holland and Slovenia** • Two programs of kitchen furniture, high price level for BIH and **Croatian** markets and low price program for **Holland market** • Office Furniture in mid and low price segment for BIH markets	• **Total integrated quality management system** • Every material what comes in to production processes and every material what is going out of the company is controlled and documented • all parts of production are with codification to identify every peace or element of production at any time	• Time to meet German customers to expand export activities • Highly skilled personal • High cost to train employees in quality management system and operators for CNC machinery	• Reach for each program of furniture an high level of quality • Reach to full capacity • Improve coffin production with partner company FULL • Extend market coverage to German furniture Traders

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• Depending of demand two or three shift production • Design of bathroom furniture is done together with Holland partner (marikie) • production of 50.000 toilet seats monthly • provide services of board cutting to SME • provide elements of furniture ready to assembly	• Able to upgrade each furniture program if there is demand	• Extremely high level of productivity (96%) because of computerized optimization of material and utilization of rests • All implemented materials are purchased from best suppliers, are certified and meets conditions to export anywhere • Products for Croatian markets are tested in Slavenski brod. • Some customers from destination countries require certification • Owner did preparation to be ISO 9001-2000 certified		

DALLAS: Vlakovo 154, 71215 Sarajevo, BIH

Manager: Dipl: Ing. Mas. Elvir Hajrovic

Large-sized Enterprise 1.300 Employees in 7 Factories, 530 in Sarajevo production unit

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of upholstered furniture for home and office** • **Production of massive beech wood home furniture** • **Production of board based furniture for home and office** • Combination of board and massive wood furniture in parallel situated production line • one shift production	• 20% of upholstered furniture for **ex Yugoslavian** market • 80% for domestic • Home furniture are exported to **Luxembourg, Holland and Lybia** (traditional Muslim market) • currently 40% of installed capacity is used	• **80% of products are tested in Croatia** • **20% of products are tested in Zagreb** • Processes are in parts controlled and documented • Product quality variable because of obsolete implemented technology and insufficient technical knowledge of workers to produce furniture from solid wood • 30% high quality • 70% middle quality • EU customers does not require ISO standardization	• Production flow unification and process control • Constant increase of price for imported clipboards • State does not stimulate exports • High rate of interest for loans • Lack of national production of boards (MDF, clipboard, high quality plywood) • Problem of internal transport of products during production process • professional skilled staff	• Reach market to equip hotel business in BIH and forward • Developing 100 new kitchen furniture elements • Slowly modernization of technical equipment • Interested to enter in EU markets • Finishing unit to be modernized • Able to be competitive in different markets increasing productivity to face lower prices • Sales office will be opened in Sweden for all Scandinavian countries • Expand to Austrian markets with yacht interiors

Top Wood, Buhine, Kucrbb, 72250 Vitez

Director: Slaven Buhic

Medium-sized Enterprise, 25 – 45 employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **massive and multi-layered wooden flooring** • All raw materials bought from suppliers in the RS	• **Almost 100% of production exported. Main clients in UK and the Netherlands**	• **Quality control is said to be taken very seriously**. • Raw materials are selected very carefully. • Quality certificates and quality management to **ISO 9001 are not an issue** • UK market does require sustainable forests managing certificates. These certificates cannot be provided by the RS suppliers • Top Wood present a sort of self-certification on the sustainable practice of the suppliers. • Due to modern equipment, Top Wood meets the clients' standards and quality requirements.	• Working capital problems (time span between outgoing payments for raw materials and incoming payments after delivery of products to end customers) • High investment in modern technology and equipment • Very difficult to get export guarantees ("already an IGA client, but their support alone is not sufficient") • Conditions for long-term loans for investments	• Increase annual growth rate from 20% up to 50%

Bosna Wood, Branilaca Starog Viteza 55 Town: 72251 Stari Vitez, BiH

Director: Sirad Hodzic

Small enterprise, 8-16 employees

Core activities and general information	Export activities	Quality related issues	Bottlenecks & Problems	Future planning
• **Production of plywood and clipboard based home furniture** (small cabinets of all sorts, baby changing tables, mini kitchens for small single households) • Contacts with potential clients in EU are established by his son who works in the wood sector in Belgium	• **100% of production exported, most buyers in Italy, France and Belgium** • Kitchens for France market	• **ISO 9001 certificated** Plywood Purchased from Slovenia • Certified supplements are imported from different countries • Receive precise work order and production instruction from foreign customer • None of the clients perform any quality control of the final products • The clients' instructions and drawings are implemented with the highest possible precision (2 CNC machines)	• Working capital problems (production circle up to 90 – 120 days) • Tax (VAT) refund is always delayed, may take up to half a year • Very high import taxes have to be paid for either in advance or within 7 days • Very difficult to get adequate export guarantees. Support by IGA is very useful but nowhere near sufficient	• Possibilities to increase annual growth, but currently satisfied with production capacity

ANNEX 8: WOOD AND FURNITURE TELEPHONE SURVEY: KEY FINDINGS PER COMPANY

COMPANY: SINKRONA D.O.O., SARAJEVO

Contact person: Smail Kustric

Phone number:033 429 410; Mobile phone: 061 827 748

Sinkrona d.o.o. Sarajevo is privately owned company established in 2005 and presently employing 27 workers. Company produces upholstered sitting room sets and beds. The main export markets are Croatia, Serbia, Montenegro and to some extent Austria, Sweden and UK.

Export

Export participates with about 40% in the company's total sale.

About 75% of total export to foreign markets is done through direct export to end buyers while the rest of 25% of total export is done indirectly through partners (intermediaries) in the above mentioned countries.

According to the manager of the company, their main competitive advantages on foreign markets are price and design of their products.

The main reasons for export orientation of the company are: small local market unable to absorb their total production and extremely large concentration of competitors in local market.

They had a problem with production capacity since they were unable to respond to growing demand for their products. Presently they are in process of expanding their production capacities.

Access to foreign markets

As mentioned earlier, their main export markets are neighboring countries (Croatia, Serbia and Montenegro). When it comes to their export in Austria, Sweden and UK, up to now they have not managed to find permanent partners in these markets that would ensure their continuous presence in these markets. All up to date exports to these countries were based on one-time specific orders.

Their attempt to export to UK failed since they were unable to respond to buyers' requirements with regard to adjustment of their standard products.

The company does not have a marketing plan and their budget for promotion and marketing is low. Main promotion mechanism and source of information about domestic and foreign markets are regional fairs. Since the company is mainly oriented towards the markets in the region, it participates in the fairs in Sarajevo, Zagreb and Belgrade on regular basis. Majority of export deals were made through direct contacts during these fairs. In contrast to Zagreb and Belgrade fairs, Sarajevo fair is small and it is not enlisted in international calendar of fairs and BiH companies have little benefit from participating in it.

Export administrative requirements

When it comes to export to EU member countries, they were not faced with any specific administrative barrier. Except for EUR1 form[13], attest about safety/flammability of materials used in production of furniture (only for Austria and UK) and regular market inspection at the EU border, there were no other administrative requirements. No attest regarding quality and durability of products were required.

It seems that export to the markets in the region, especially to Croatia, is more demanding. In order to export to Croatia, BiH wood processing companies must have their products attested by EURO INSPECT – Wood

[13] EUR1 form – proof of the origin of the product.

Control Company from Croatia. According to the owner of the company, the process of receiving attests is costly and time-consuming.

Up to date no such requirement exists when it comes to export to other countries in the region. However, it seems that, in the near future, Serbia will also require that furniture products are attested before they enter their market.

Export financing

All small producers have difficulties with working capital.

When it comes to collection of receivables, they cooperate with Slovenian factoring company "Prvi faktor", which charges fee of 2.5%-4% of the billed amount. They do not work with the Investment Guarantee Agency since they are too slow and require a lot of paperwork.

Quality control

Sinkrona d.o.o. does not have the appropriate quality control system. Although only one person is in charge of quality control, they claim they have a control of quality of raw materials they use in production process and that they have some kind of quality of control of the final products. Quality control in production process is performed by workers that perform specific operation in a production process.

Up to date the company has not had any contacts with local standardization and measurement institutions or institutions for accreditation and certification.

Other

Their main complaints are related to unfavorable business environment in Bosnia and Herzegovina and high cost of doing business in Bosnia and Herzegovina.

Small producers have limited access to information about foreign markets. They believe that a lot could be done through organized support in promotion of BiH exporters and their products. According to them, support to the exporters' participation in fairs organized in EU countries would be useful type of assistance. Participation in these fairs is very expensive so organized participation of groups of exporters together with subsidies of costs provided by third parties would enable them to gain new contacts and partners and increase their export.

COMPANY: LUXOR D.O.O. / SABOS

Contact person: Ismar Galijasevic

Phone number:033 250 080; 061 140 432;

SABOS company was established in 1999 and their operations were mainly related to sale and production of sawn wood.

SABOS privatized STOLICARA factory from Turbe. This factory mainly produced chairs. SABOS entered into the joint venture with the LineWood and the Timmset producers of chairs from Italy - result of that joint venture was Luxor d.o.o. company from Turbe. Afterwards Luxor d.o.o. was reregistered under the name Standard Turbe d.o.o. and present share of the SABOS company in the ownership structure of the Standard Turbe d.o.o. company is 90%.

Today, Standard Turbe company has 340 employees and produces components of chairs. They still do not have the assembly line that would enable them to produce the final product.

Export

Standard d.o.o. Turbe, on a monthly basis, exports products in the value of 1.1 million KM.

Main export markets are Italy, Hungary, Poland and to some extent Germany and Croatia. Primary customers are major foreign final producers of chairs. About 50% of total export is done directly for known buyers in Italy, Hungary and Poland and 50% indirectly through partners (intermediaries). Large share of export is done through the company Standard d.d. Sarajevo that is one of the largest producer of chairs, tables and cabinets in Bosnia and Herzegovina. Standard d.d. Sarajevo is buying from them components of chairs, assemblies them and exporting them directly to Germany (95% of production of the Standard d.d. Sarajevo is exported to Germany – about 10 trucks of furniture is exported on daily basis).

According to Mr. Galijasevic, their main competitive advantages in foreign market are:

- low price of their products;
- quality of their products;
- high demand for products produced from beech wood.

Access to foreign markets

They do not have a marketing plan and they do not have a budget for marketing and promotion. The reason for that is that they have steady business relationship and long term contracts with their partners in Italy, Hungary and Poland, which are buying their entire production. leading source of contacts with potential buyers and partners are fairs. However, they have four employees directly working on export activities.

Export administrative requirements

Thus far they have not had any specific requirement regarding quality control, certification and accreditation for their product, which are exported. Except for EUR1 (certificate on product origin) and requirement for export to UK about attest on flammability of the product, there were no other requirements.

Again, like other producers, they confirmed that administrative requirements for export to EU member countries were lower and less complicated then requirements to other countries.

Similarly to the case of Sinkrona d.o.o. company, when they export to Croatia, their products have to be attested by a Croatian company.

Also, when they export to Egypt, they have to obtain:

- certificate on product origin;
- certificate on sterility of the product;
- proof signed by the certification organization;
- certificate from the Chamber of Foreign Trade (about origin of the product);
- confirmation from the Embassy of Egypt.

Export financing

Export is financed in cooperation with the local banks and revolving loans. They have no problems with collection of receivables. Slovenian factoring company (F-Factor company) offered them their services but they disclaimed them.

Quality control

The company is not ISO certified. Five employees work in quality control and they have written procedures for quality control. Quality control covers control of inputs (raw materials), control in production process and control of the final product.

COMPANY: D.D. DI SANICA, SANICA

Contact person: Eldin Omer Salah

Phone number:037 67 20 24

DI Sanica d.d. was founded in 1959 and presently employs about 250 workers. The company's main products are saw timber, furniture components and plywood boards.

The company has a strong partnership with the "EGH-SA" company from Switzerland.

Export and access to foreign markets

Primary export markets are Spain, Portugal, Italy, Latvia, Slovenia, Croatia, Serbia, Germany and Montenegro. The company managed to penetrate foreign markets primarily because of the partnership with a Swiss company.

The company exports about 65% of their total production. According to the representative of the company, their main competitive advantages in foreign markets are low price and good quality of products.

Strong export orientation was induced by limitations of a small local market in BiH.

The company has a marketing plan and the main goal of their plan is further expansion in foreign markets. Company also performs research on foreign markets but the main sources of the information about foreign markets are internet, fairs and direct contacts with clients. Two employees are in charge of export activities and business development in foreign markets.

All products exported are company's standard products and there were no requirements for adjustment of their products. The only modifications that were made were related to packaging and safety standards and regulations in foreign markets.

They are not facing any specific administrative obstacles when exporting to foreign markets and they are able to fully comply with all administrative requirements related to attesting, verification and certification of their products.

Quality control

Company possesses ISO 9001-2000 certificate. Three employees work in quality control. Analysis and verification of their quality control system was done by the TÜV. Their control equipment is registered and attested by the Institute for standardization and measurement. According to the company representative, certification of their products is done in accordance with EU standards and this certification is performed by the company Euroinspekt. They also claim they performed assessment of the risk and safety of their products.

COMPANY: JADRINA D.O.O. GRACANICA

Contact person: Ramiz Grapkic

Phone number:035 704 938

Jadrina d.o.o. from Gracanica was established in 1965 and presently employs about 280 workers. Jadrina d.o.o. produces composite, upholstered and solid wood furniture. Their main products are bedroom sets, sitting room sets, cabinets and kitchen furniture.

Export

The company exports about 55% of their total production and annual value of their export is amounting to 3 million €. Majority of the export is done indirectly through intermediaries and they usually sell to large furniture shopping centers. Main competitive advantage in foreign markets in low price of their products. Orientation towards export is caused by a strong competition and limited possibilities for sale in local market in BiH.

Access to foreign markets

They do not have a marketing and promotion budget and they do not perform market research. All the customers are acquired by a direct contact initiated either from the side of the company or potential customers.

According to the owner of the company there is no single day that someone of potential buyers does not visit them. There is nobody in the company in charge of export activities and business development and, according to the owner, all these activities are performed exclusively by himself.

Also, according to the owner, there is no buyer in foreign markets, which wants to buy standard products of BiH companies. All products they export are developed on the basis of the buyers' specifications and requirements.

Export administrative requirements

There are no specific requirements related to attesting and certification of products exported to EU member countries. If they export to UK, there is a requirement for certificate on flammability of materials used in production of furniture. The only requirement for product attests is coming from Croatia.

Quality control system

The company does not have a quality control system and the owner believes that ISO certification is waste of time and money.

Other

Similarly to other companies, owner of Jadrina d.o.o. complains about work of BiH custom administration. He stated that customs administration should introduce home customs inspections. This would significantly reduce cost of the company. Customs authorities for his company are based in Tuzla. All his export is towards the West and Tuzla is in the opposite direction (East) from Gracanica where his company is based. According to Mr. Grapkic, his trucks are unnecessary driving every day about 100 kilometers to Tuzla and back to Gracanica in order to transport their products for customs inspection in Tuzla. Because of it, he is incurring additional cost for fuel in the amount of 50,000 KM on annual basis.

ANNEX 9: MOSTAR TRADE FAIR SURVEY: KEY FINDINGS PER COMPANY

MOSTAR TRADE FAIR SURVEY: "COMEX" BRCKO

In what sector/ branch of economy is your company working?

Paper industry (Packaging)

What are your main products?

Paper bags, 1-50 kg packaging

What is the size of your company?

Number of employees: **27**

Annual turnover: **n/a**

Are you exporting to the EU? **No**

If yes, since when and which products?

If you are not exporting to the EU, is that

because you are not interested?

due to difficulties related to such exports?

Can you give a brief description of these difficulties?

The company is waiting to install new equipment that can be used for the production of products that comply with EU standards

Is certification and/ or testing by an accredited laboratory an EU requirement for your products? **No, but when the production starts for export, all certificates necessary for export will be obtained.**

Would you use the services of national certification bodies and/ or laboratories in BiH if their certificates were recognized abroad? **Yes**

MOSTAR TRADE FAIR SURVEY: "FIS" VITEZ

In what sector/ branch of economy is your company working?

Panel Furniture

What are your main products?

Production of panel furniture and products made out of solid wood

What is the size of your company?

Number of employees: **2000 employees (200 in production)**

Annual turnover: **n/a**

Are you exporting to the EU? **Yes, Austria**

a) If yes, since when and which products?

Solid wood products are exported trough own company in Vienna – Austria. Increase of export is possible.

If you are not exporting to the EU, is that

because you are not interested?

due to difficulties related to such exports?

Can you give a brief description of these difficulties?

Is certification and/ or testing by an accredited laboratory an EU requirement for your products?

Yes, ISO 9001:2000 issued by SGS Switzerland

Would you use the services of national certification bodies and/ or laboratories in BiH if their certificates were recognized abroad? **Yes**

MOSTAR TRADE FAIR SURVEY "VELMIT MOBILI" SARAJEVO

In what sector/ branch of economy is your company working?

Business furniture

What are your main products?

Business chairs

What is the size of your company?

Number of employees **6**

Annual turnover

Are you exporting to the EU?

If yes, since when and which products?

If you are not exporting to the EU, is that

because you are not interested?

due to difficulties related to such exports?

Can you give a brief description of these difficulties?

Small capacity

Is certification and/ or testing by an accredited laboratory an EU requirement for your products? **No certificates.**

Would you use the services of national certification bodies and/ or laboratories in BiH if their certificates were recognized abroad?

Yes if necessary

MOSTAR TRADE FAIR SURVEY: "NOVA FORMA" B.SAMAC

In what sector/ branch of economy is your company working?

Furniture

What are your main products?

Solid wood furniture, Glass furniture

What is the size of your company?

Number of employees: **650**

Annual turnover

Are you exporting to the EU?

If yes, since when and which products?

Yes, Slovenia, Germany, Hungary, England, France and Croatia as non EU country. Solid wood furniture, glass furniture

If you are not exporting to the EU, is that

because you are not interested?

due to difficulties related to such exports?

Can you give a brief description of these difficulties?

Is certification and/ or testing by an accredited laboratory an EU requirement for your products?

Quality certificate from Belgrade and Zagreb Institutes, depending on buyers requirements.

Would you use the services of national certification bodies and/ or laboratories in BiH if their certificates were recognized abroad?

YES

MOSTAR TRADE FAIR SURVEY: "NOBIL" NOVA BILA

In what sector/ branch of economy is your company working?

Furniture

What are your main products?

Production of mattresses, bed sheets and beds

What is the size of your company?

Number of employees : **50**

Annual turnover: n/a

Are you exporting to the EU? **Yes, Germany and Netherlands**

b) If yes, since when and which products?

Since 2005, mattresses

If you are not exporting to the EU, is that

because you are not interested?

due to difficulties related to such exports?

Can you give a brief description of these difficulties?

Is certification and/ or testing by an accredited laboratory an EU requirement for your products?

Yes, All products, ISO 9001:2000, BVQI, BHCERT

Would you use the services of national certification bodies and/ or laboratories in BiH if their certificates were recognized abroad?

Yes

MOSTAR TRADE FAIR SURVEY: "MATICANKA" DOO, ORASJE

In what sector/ branch of economy is your company working?

Furniture and baskets

What are your main products?

Baskets

What is the size of your company?

Number of employees **7 permanent and 360 cooperates**

Annual turnover

Are you exporting to the EU?

If yes, since when and which products?

Yes for almost 13 years in Austria and Germany

If you are not exporting to the EU, is that

because you are not interested?

due to difficulties related to such exports?

Can you give a brief description of these difficulties?

Is certification and/ or testing by an accredited laboratory an EU requirement for your products?

ISO 14001 in preparation

Would you use the services of national certification bodies and/ or laboratories in BiH if their certificates were recognized abroad?

Yes

ANNEX 10: FOOD SAFETY REPORT BY LOCAL CONSULTANT MARIJO PERC

B&H Food Safety System and Infrastructure

Developed by: Marijo Perc, Local Consultant

Sarajevo, April 2007.

Table of Contents

Acronyms:

Ministry of Foreign Trade and Economic Relations (MoFTER)

State Veterinary Office of B&H (SVO)

Administration of B&H for Plan Health Protection (AfPHP)

Ministry of Civil Affairs (MoCA)

Food Safety Agency (FSA)

Institute for Accreditation of B&H(IABH)

Institute for Public Health FBH (IPHFBH)

Institute for Health Care RS (IHCRS)

1. Preamble

An effective national food safety and quality control system is essential to protect the health and safety of domestic consumers. At the same time, there are preconditions for successful international food trade.

The process of establishing an efficient national food safety & quality control system in B&H and establishment of national responsible bodies in this field is gradual. It requires a national food safety strategy based on the WHO/FAO recommendations and international requirements and standards, adoption of uniform procedures for food control and inspection on the whole State territory. Because of the above mentioned, it is very important to understand present situation in this field in B&H.

2. Introduction

Under the 1995 Dayton Peace Agreement, Bosnia and Herzegovina (B&H) is divided into two administrative units/entities: the Federation of Bosnia and Herzegovina (F B&H) and the Republic of Srpska (RS)

F B&H consists from 10 Cantons and 80 Municipalities and RS consists from 64 Municipalities.

There is also the Brcko District, established in November 1999 with a special administrative status, like a third administrative unites.

Constitution of B&H, Article III.1. determinated state responsibilities:

a) Foreign policy

b) Foreign Trade policy

c) Customs policy

d) Monetary policy like it is mentioned in Article 7.

e) Funding institutions…

Having in mind this type of state organization and the Constitution of B&H, Article III.3. stating "All governmental functions and powers not expressly assigned in this Constitution to the institutions of Bosnia and Herzegovina shall be those of the Entities", for a long period of time it was not possible to start with the creation of single customs territory and single economic space in all segments of the Foreign Trade Policy. This especially applies to veterinary, sanitary, phytosanitary and quality control areas.

The above mentioned is the main reason why B&H does not have institutions at the state level in respect to food chain, unlike other countries in the region (e.g. ministries of health and ministries of agriculture exist at the entity level on the Federation B&H, the Republic of Srpska and in the District Brcko). Because of that fact, the Ministry of Foreign Trade and Economic Relations (MoFTER) has taken the leadership in area of food safety and quality control. As a matter of fact

this Ministry is the only institution in the country, which can co-ordinate activities in the area of food safety and quality control between the stakeholders.

3. Clarification of foreign trade policy and rule of MoFTER

Constant efforts of several representatives from the Entities to place the issue of food safety & quality control, human health, animal and plant health protection under the umbrella of agricultural and health care policy within Entities competences have further complicated the situation. Because of that the first thing that we need to clarify is the Foreign Trade Policy on the base of Law of Foreign Trade Policy adopted 1998. ("Official Gazette B&H" No 07/98):

Article 2

1. The Law is based on the Constitution of Bosnia and Herzegovina, which provides the responsibility of the State for Foreign Trade policy.

2. Unilateral measures concerning Foreign Trade and Agreements with third countries related to Foreign Trade are the responsibility of the institutions of BH.

Article 3

1. For the purpose of the Law "Foreign Trade policy" shall be understood to mean State Uniform Principles for the application of all unilateral measures concerning the international movement of Goods and Services, and for the negotiation and the conclusion of any agreements with third countries, regional or international organizations related to international trade.

3. For the purpose of the Law "Agreements with third countries related to Foreign Trade" shall be understood to mean: any agreement or instrument related to international trade and in particular any trade agreement with other Countries, any agreement with the European Union, any membership in Customs Unions, in free-trade areas and in the World Trade Organization.

Farther regulations (Articles 6, 7)

Article 6

The export and import of goods shall be free of any quantitative restriction or of any measure of equivalent effect.

The provisions of Paragraph 1. of this Article shall not preclude prohibitions or restriction on international trade of goods justified on grounds of publicity, public morality, public policy or public security, the protection of health and life of humans, animals or plants, the protection of national treasures possessing artistic, historical or archaeological value, or the protection of industrial commercial property or to eliminate drugs and waste materials.

Beside the provision of the previous Paragraph,

The export and import of goods shall be provided under the same conditions on the whole territory of Bosnia and Herzegovina.

Council of Ministers of Bosnia and Herzegovina shall regulate under the provision of this Low that export and import of certain goods may be subject to customs tariffs and other specified conditions, including requests for statistic data.

Imported goods shall be submitted to the same tax and legal conditions as imposed on similar products produced in BiH.

The classification of goods according to individual regimes of export and import, the extent or value of quota, the manner, time-period, and conditions for their classifications shall be prescribed by the Council of Ministers of Bosnia and Herzegovina.

6. Ministry of Foreign Trade and Economic Relations of BiH (hereinafter: BiH Ministry of Foreign Trade) is providing needed number of bilateral and multilateral permits, quotes, contingents, detachments etc. for the needs of BiH economy in accordance with the needs and possibilities given by international Agreements. Distribution of Entities and by them to final users.

Article 7

Goods to be imported must comply with standards, technical and quality norms prescribed or recognized in BiH, as conditional for their introduction and or use in Bosnia and Herzegovina, including standards of Entities.

Sanitary, veterinary, phytopatological or ecological control of imported goods shall be obligatory and in accordance with special regulations.

Goods shall remain under customs administrations and supervision by the time all the conditions stipulated under Paragraph 2. of this article.

Goods for which procedure of compulsory test certification has been prescribed must be duly marked once the relevant test has been obtained.

Goods whose trade is prohibited in Bosnia and Herzegovina may not be imported or temporarily imported.

The BiH Council of Ministers, consistent with obligations under trade agreements, prohibit the export, import or transit of specific goods across Bosnia and Herzegovina or prescribe conditions under which such goods may be imported, exported, or transported in transit to prevent endangering human lives and health or the environment.

Notwithstanding the first and second Paragraphs of this Article goods may be temporarily imported for upgrading purposes if this does not endanger human, animal, or plant life or health.

Have required in fact SPS and TBT rules what was enough base for beginning to build National system in the area of Food Safety & Quality Control.

It is appropriate to mention that the Law on Foreign Trade Policy has imposed the obligation of collaboration between the State and the Entity bodies to fulfill the obligation from the field of Foreign Trade Policy. To develop regulations in this field it is necessary to get the consent of authorized Entity bodies, what have been successfully done.

The state-level Ministry of Foreign Trade and Economic Relations was established in 1998. Inter alia, its activities aimed to create a single economic space in Bosnia and Herzegovina in the filed of protection of human, animal and plant health using as a basis the WTO, SPS and TBT agreements and the International Convention on Harmonization of Frontier Controls of Goods. It took more than two years until the entity-level officials accepted the fact that the international trade in goods, as well as trade with animal and plants, comes under the Foreign Trade Policy at the State level. We should stress the fact that all measures concerning human, animal and plants health protection, and the measures in relation to Food Safety in B&H (sanitary, quality control, phytosanitary and veterinary) are undertaken by the Ministries of Agriculture, Health, and by the Ministries of Trade at the Entity level; B&H Ministry for Foreign Trade and Economic Relations was the only body at the State level. Previously mentioned facts shows the efforts made by Ministry for Foreign Trade and Economic Relations to fulfill preconditions to create and establish the central responsible bodies and to coordinate drafting of the legislation at the State level to start with development of the national food safety system in line with the international requirements, standards, regulations and recommendations.

Unfortunately, Bosnia and Herzegovina is not member of WTO and no active participate in the main international organization in the area of food safety as FAO and WHO. Bosnia and Herzegovina submitted the Memorandum on Foreign Trade regime in B&H in September 2002 to WTO in order to become a member.

The organization responsible for the WTO SPS notification procedures and enquiry point has not been established.

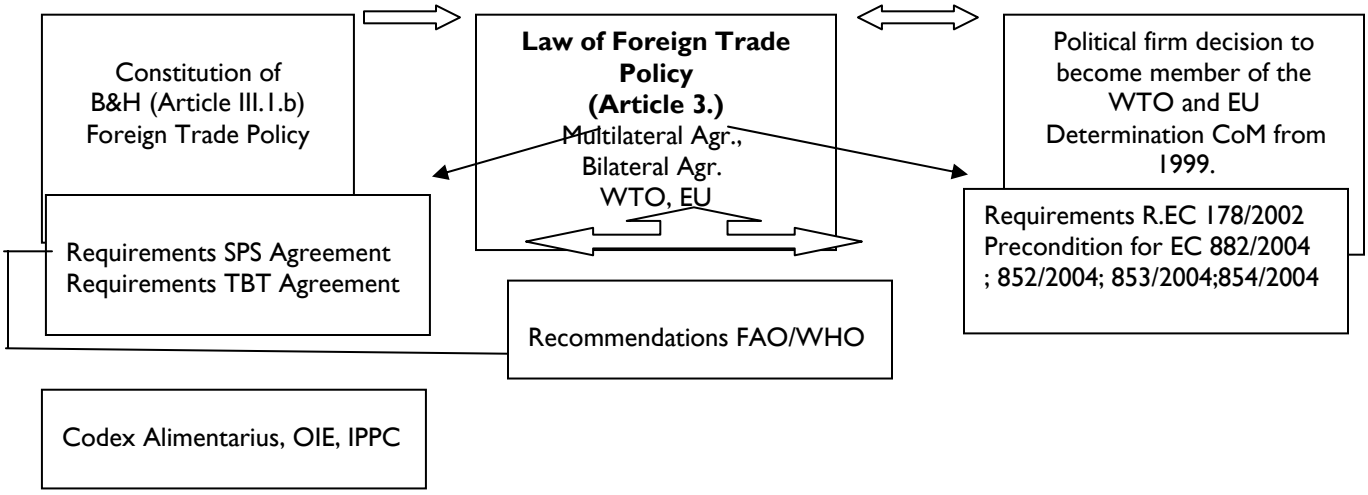
Also, except OIE, Bosnia and Herzegovina no participate in Codex Alimentarius and IPPC activities.

4. Activities

Because of misunderstanding of the problem between different institutions on the state and entity level, we can say that 2001 was actual beginning of establishment of the national regulative framework for the Food Safety area.

The shortcomings of the present food safety system in B&H are well recognized by the some experts within the Ministry of Foreign Trade and Economic Relations, State Veterinary Agency, Entity Ministries and relevant laboratories.

The activities started to be significantly intensified during 2003 and 2004. Scheme below shows the basis for the work in this area with the purpose to avoid misunderstandings with different actors regarding the legal bases for establishing efficient National food safety system in B&H, on the base of voluntary harmonization with international requirements:



Regarding the national responsible bodies in the field of food safety and quality, the main institutions have been established, but not in there full capacity.

5. Institutions and Legislations:

Beside the Law on Foreign Trade Policy ("Official Gazette B&H" No 07/98),the Law on Consumer Protection ("Official Gazette B&H" No 07/02) and the Law on import-export Quality Control ("Official Gazette B&H" No. 13/03), for following basic laws have been adopted before the end of 2003 as a basis for establishing National Food Safety System:

- Law on Establishing of the Institute for Accreditation (Official Gazette B&H , No. 29/00)
- Law on Accreditation (Official Gazette B&H, No. 29/00)
- Law on Establishing Institute for Standards, Metrology and Intellectual Properties(Official Gazette B&H , No. 29/00)
- Law on Standardization (Official Gazette B&H , No. 29/00)
- Veterinary Law of Bosnia and Herzegovina ("Official Gazette B&H" No. 34/02").
- Law on Plant Health Protection ("Official Gazette B&H" No 23/03)

On the base of above mention laws were established State Veterinary Office, Institute for Accreditation and Institute for Standards, Metrology and Intellectual Properties.

In that period of time the Veterinary Law and Law on Plant Health Protection was more or less harmonized with EU requirements. Based on the Veterinary Law, was established in Banja Luka in 2003 an Operating Agency, responsible for implementation of the Animal identification and movement control scheme in Bosnia and Herzegovina.

Unfortunately, because of the different reasons, the Institute for Standards and Institute for Accreditation are not established in full capacities, especially in the area of food safety. The Institute for Accreditation didn't participate in the international and regional accreditation organizations like the International Laboratory for Accreditation Cooperation (ILAC) and the European Co-operation for Accreditation (EA).

From the other side, on the first place because of EC new international requirements it was necessary start with establishing institutions how the food chain will be circled.

Scheme below illustrates present institutional food chain in B&H:

- Institutional Food Chain in B&H

- Council of Ministries B&H

-MoFTER -MoCA -FSA -Institute for Accreditation. -Institute for Stand -Institute for Metrology
-State Veterinary Administration
-Administration for Plant Protection of B&H **No Governmental Organizations**

Government of F B&H	Government of RS	Government of BD
-Ministry of Health - -Institute for Public Health -Ministry of Agriculture … -Ministry of Trade -Inspectorate	-Ministry of Health - -Institute for Public Health -Ministry of Agriculture … -Ministry of Trade and Tourism -Inspectorate	-Agriculture Dep. -Health Dep. -Inspection Dep.

5.1. Ministry of Foreign Trade and Economic Relations (MoFTER)

Task and competencies

As an above mention Ministry of Foreign Trade and Economic Relations was established in 1998. The task and the rule of MoFTER besides the Law on Foreign Trade Policy ("Official Gazette B&H" No 07/98, 35/04) was defined in the Law on Ministries and Other Administrative Bodies of B&H ("Official Gazette B&H" No. 05/03, 42/03, 26/04,42/04)

The others laws listed below define rights and responsibilities in the area of animal, plants and human protection as well as preconditions for international trade of food and feed.

1. Law on International Convention on Harmonization of Border Control of Goods («Official Gazette R B&H" No 25/93)

2. Law on Consumer Protection ("Official Gazette B&H" No 25/06)

3. Veterinary Law of Bosnia and Herzegovina ("Official Gazette B&H" No. 34/02)

4. Law on import-export Quality Control ("Official Gazette B&H" No. 13/03)

5. Law on Plant Health Protection ("Official Gazette B&H" No 23/03)

6. State Plant and Seeds Law (OG B&H, No 03/05)

7. State Law on Fertilizers (OG B&H, No 46/04)

8. Law on New Kind of Plant Species (OG B&H, No 46/04)

9. Law on Phytopharmaceuticals (OG B&H, No 49/04)

10. Food Law (OG B&H, No 50/04)

The MoFTER is state authority for:

- Foreign trade policy
- Tariff and customs policy
- Single economic space
- Representing B&H in international organizations in the area of foreign trade policy
- Preparation bilateral and multilateral agreements in the area of foreign trade policy
- Preparation macroeconomics strategic documents from the area of economic relations
- Control of goods and services in the context of foreign trade regime
- Consumer protection
- Competition
- Coordination of international technical assistants except technical assistants of EU
- Agriculture
- Energetic
- Environment protection, development and using national resources
- Veterinary medicine
- Tourism

- Representation of the country in all above mentioned.

The internal working structure in the context of Food Safety is:

- Sector of Foreign Trade Policy and Foreign Investments - Department for Foreign Trade Policy & Control

- Sector for Economic Development - Department for Market Surveillance, Consumer Protection and Competition

- Sector for Agriculture, Food, Forestry and Rural Development

Human resources

Except one person (University degree) in Department of Foreign Trade Policy & Control in charge for export import regime and frontier control of goods and that we can connect with field of food safety, other Sectors/Departments are not to fill planned vacancies.

In the Sector for Economic Development - Department for Market Surveillance, Consumer Protection and Competition was planed to hire 6 persons (5 University degree and 1 Secondary school) and for now this Department is not established.

In the Sector for Agriculture, Food, Forestry and Rural Development has been planed 28 persons in 4 departments, but for now is 3 employed (2 University degree/DVM and Agronomist/ and 1 Secondary school). In the process is the admission of 9 applicants.

With support of SESMARD this sector was prepared draft Law of Agriculture, Food and Rural Development on whose base is intention to established Ministry of Agriculture and Rural Development. That draft proposal is in the procedure on the Council of Ministries and that adopting and other procedure completely dependents from the political will.

External working environment is:

MoFTER is responsible to the Council of Ministries of B&H.

Financial resources:

From the budget of B&H and donations.

International technical assistants in the field of food safety where is MoFTER responsible for implementation or where is MoFTER participate

a) Current

FAO-Regional Project TCP/RAP/3002, US $390.000 for the region,» Strengthening National Food Safety in South East European Transition Countries», the end in May 2007.

Regional CLDP SPS /Food Safety Working Group/Working Group for Animal Health/Working Group for Plant Health/ - on the base of Memorandums of Understanding for SEE countries with aim to improve cooperation in the SPS area in region

USAID LAMP- support of short terms activity in the food safety area

European Union project, 'Support for Establishment of the State Ministry of Agriculture and Rural Development' (SESMARD).b) Planned

WB project- Agriculture and Rural Development Project- duration 2007-2011, total amount 33.561.555,00 US$ with local contribution 8.532.312,00 US$

Regional SIDA Project "Food Safety & Quality Control in Balkan Region", duration May 2007-December 2010, amount 12.500.000,00 SEK for B&H

Proposal for 2008-2009- EU IPA-Support to implementation and enforcement of the B&H Food Legislation-1,000.000 EUR

5.2. State Veterinary Office of B&H (SVO)

Task and competencies

SVO is state authority for veterinary medicine organized like an integral part of MoFTER.

This body is responsible:

To suggest the regulations and coordination of unified measures, methods and approaches regarding control of communicable and parasitic diseases of animals from the list A and B of International zoo sanitary codex O.I.E.;

To suggest regulations regarding veterinary preconditions for international trade (export from Bosnia and Herzegovina and import to Bosnia and Herzegovina);

To suggest regulations on preconditions and regulations for application of uniform approach regarding registration of facilities for slaughtering, production, treatment, processing, finishing, trade and storage of products and raw material of animal origin;

To suggest the regulations regarding production, trials, approval to place in the market, control, storage and trade of veterinary drugs, and veterinary-medicinal products;

To suggest the regulations on uniform control program and bio residue monitoring in animals, products and raw material of animal origin;

To coordinate and supervise the work of border veterinary inspection and suggest the regulations for uniform documentation regarding import, and export of animals, raw material, waste and products of animal origin and to establish the unique information system for border veterinary inspection;

To establish and practice international cooperation and represent Bosnia and Herzegovina in the veterinary field with international institutions

The Veterinary Law of Bosnia and Herzegovina ("Official Gazette B&H" No. 34/02) and bylaws on that base, define rights and responsibilities SVO in the area of animal health and welfare, veterinary public health, animal identification and movement control and veterinary inspection.

The internal working structure is

SVO consists of:

- Animal Health and Welfare Unit
- Veterinary Public Health Unit
- Veterinary Inspection Unit
- Border Veterinary Inspection
- Animal Identification and Movement Control Agency

Human resources

13 employed in the main office-9 DVM and 4 technicians

21 inspectors in Inspection Unit

13 employed (2 DVM, 1 Computer expert and other technical staff) in Animal Identification and Movement Control Agency in Banja Luka

In the process is the admission of 3 applicants (DVM) for main office.

External working environment is:

SVO is responsible to the MoFTER.

Financial resources:

From the budget of B&H and donations.

International technical assistants where is SVO responsible for implementation or where is SVO participate

a) Current

USDA-National Quarantine Stations Project

FAO support for preparation strategy in fishing

Twinning Project "Support to the State Veterinary Office" of Bosnia an Herzegovina

EU-IBM-Integrated Border Management

b) Planned

WB project- Agriculture and Rural Development Project

Laboratories in the veterinary area

On the base of Decision of Council of Ministries about authorized laboratories in B&H from August 2005, was established authorized laboratories for

-implementation of following and control residue Plan

-control infection diseases

The main laboratories for the above mentioned activities are located on Veterinarian Faculty in Sarajevo and Veterinarian Institute Vaso Butozan in Banja Luka. In addition those laboratories existed

Veterinarian Institute in Mostar

Veterinarian Institute in Tuyla

Canton Sarajevo Veterinarian Institute

Veterinarian Institute in Bijeljina

Veterinarian Institute in Zenica

Laboratories are not accredited, except Canton Sarajevo Veterinarian Institute that was accredited from the side of IABH and information about beginning of process of accreditation is not available.

5.3. Administration of B&H for Plant Health Protection (AfPHP)

Task and competencies

AfPHP is state authority for all aspects plant health protection. That also mean:

-preparation, issuing and implementation of Phytosanitary legislative.

-co-ordination and co-operation with Entities and Brcko District in the above-mentioned area.

-presentation of the state in all above mentioned

AfPHP is an integral part of MoFTER.

The laws listed below need to dominate work of this institution:

- Law on Plant Health Protection ("Official Gazette B&H" No 23/03)
- State Plant and Seeds Law (OG B&H, No 03/05
- State Law on Fertilizers (OG B&H, No 46/04)
- Law on New Kind of Plant Species (OG B&H, No 46/04)
- Law on Phytopharmaceuticals (OG B&H, No 49/04)
- State Plant and Seeds Law (OG B&H, No 03/05)

The internal working structure is:

For now internal working structure is not adopted and except Director, Deputy, and Secretary there are no other employed

Human resources

3 employed (Agronomist-University degree)

External working environment is:

This body is responsible to the MoFTER.

Financial resources:

From the budget of B&H and donations.

International technical assistants

a) Current

b)Planned

WB project- Agriculture and Rural Development Project

Laboratories in the phytosanitary area

The main laboratories in this area are located on Institutes in Banja Luka, Sarajevo, Mostar and Bijeljina.

There are no accredited laboratories.

5.4. Ministry of Civil Affairs (MoCA)

Task and competencies

On the base of Law on Ministries and Other Administrative Bodies of B&H ("Official Gazette B&H" No. 05/03, 42/03, 26/04,42/04) among other things MoCA is responsible for establishing basic principles of coordination activities between entities in the area of public health.

The internal working structure is:

Sector for Public Health was planed with 18 employs

Human resources

For now 4 employed (2 M.D. and 2 technical stuff)

External working environment is:

MoCA is responsible to Council of Ministries.

Financial resources:

From the budget of B&H and donations

International technical assistants

a) Current

b)Planned

5.5. Food Safety Agency (FSA)

Task and competencies

On the base of Food Law ("Official Gazette B&H" No. 50/04) the rule of this institution is:

The Agency shall provide scientific advice and scientific and technical support for the legislation and policies in Bosnia and Herzegovina in all fields, which have a direct or indirect impact on food and feed health correctness. It shall provide independent information on all matters within these fields and communicate on risks.

The Agency shall be a point of contact for the activities within the Codex Alimentarius Commission.

The Agency shall contribute to a high level of protection of human life and health, and in this respect take account of animal health and welfare, plant health and the environment on the territory of Bosnia and Herzegovina.

The Agency shall collect and analyze data to allow the characterization and monitoring of risks, which have a direct or indirect impact on food and feed health correctness.

The mission of the Agency shall also include the provision of:

scientific advice and scientific and technical support on human nutrition in relation to legislation of Bosnia and Herzegovina and assistance concerning communication on nutritional issues within the framework of the health program in Bosnia and Herzegovina;

scientific opinions on other matters relating to animal health and welfare and plant health;

scientific opinions on products including food and feed relating to genetically modified organisms.

The Agency shall provide scientific opinions that will serve as the scientific basis for the drafting and adoption of the Council of Ministers' measures in the fields falling within its mission.

The Agency shall carry out its tasks in conditions, which enable it to serve as a point of reference by virtue of its independence, the scientific and technical quality of the opinions it issues and the information it disseminates, the transparency of its procedures and methods of operation, and its diligence in performing the tasks assigned to it.

The Agency shall closely cooperate with the competent bodies responsible, within the scope of their competencies, for ensuring accomplishment of Agency's mission.

The Agency and the competent bodies shall cooperate to promote the effective coherence between risk assessment, risk management and risk communication

The tasks of the Agency shall be as follows:

a) to provide the competent bodies with the best possible scientific opinions in all cases provided for by legislation and on any question within its mission;

b) to promote and coordinate the development of uniform risk assessment methodologies in the fields falling within its mission;

c) to initiate, prepare and organize drafting of implementing measures from this Law;

d) to provide scientific and technical support to the competent bodies in the areas within its mission and, when so requested, in the interpretation and consideration of risk assessment opinions;

e) to offer at disposal scientific studies necessary for the accomplishment of its mission;

f) to search for, collect, compare, analyze and summarize scientific and technical data in the fields within its mission;

g) to undertake action to identify and characterize emerging risks, in the fields within its mission;

h) to establish a system of networks of organizations operating in the fields within its mission and be responsible for their operation

i) to provide scientific and technical assistance in the crisis management procedures implemented by the competent bodies with regard to the health correctness of food and feed;

j) to ensure that the public bodies and interested parties receive rapid, reliable, objective and comprehensive information in the fields within its mission;

k) to express independently its own conclusions and orientations on matters within its mission;

The internal working structure is:

- Department for Risk Analysis
- Department for Crisis Management
- Department for Official Control, Traceability, Risk Management and Risk Communication
- Administrative Department

Human resources

FSA was planed with 49 employs (41 University degree and 8 technical stuff)

In this moment are 18 employed (9 D.V.M., 1 M.D. and 8 technical stuff)

External working environment is:

FSA is responsible to Council of Ministries

Financial resources:

From the budget of B&H, own activities and donations

International technical assistants

a) Current

EU project-Technical Assistance for the Transposition and Implementation of Technical Regulations in Bosnia and Herzegovina

b) Planned

WB project- Agriculture and Rural Development Project

Proposal for 2008-2009- EU IPA-Support to implementation and enforcement of the B&H Food Legislation

5.6. Institute for Accreditation of B&H (IABH)

Task and competencies

The Institute for Accreditation of B&H (IABH) is responsible for the following tasks:

Implementation of laws and regulations including performance of other administrative and professional tasks in the field of conformity assessment and accreditation;

To ensure the implementation of the policies designated by the B&H Parliament and the Council of Ministers B&H within its scope;

To fulfill the obligations arising from International Agreements and Contracts assumed by the B&H within its scope;

Co-operates with other state/entities bodies and associations;

Represents the interests of the B&H in the international and regional accreditation organizations, such as:

EA-European Co-operation for Accreditation (from 2005 IABH become a member of EA as the Contract of Cooperation member)

ILAC-International Laboratory for Accreditation

IAF- International Accreditation Forum

To co-operate with other international, regional and national organizations from the field of accreditation and certification

The internal working structure is:

-Department for laboratory accreditation

-Department for accreditation of certification bodies

-Department for accreditation of inspection bodies

-Administrative Department

Human resources

IABH was planed with 19 employs

In this moment are 10 employed

External working environment is:

Council of Ministries B&H

Financial resources:

State budget; own activities and donations

International technical assistants

a) Current

b)Planned

Regional SIDA Project "Food Safety & Quality Control in Balkan Region",

Proposal to EU IPA 2008-2009

Institute for Standards

Institute for Metrology

/EC 2006 Progress Report/

Little progress has been made as regards standardization and certification. Bosnia and Herzegovina has not yet begun implementing 2004 legislation on the establishment of three independent Institutes for Standards, Metrology and Intellectual Property. Consequently, issues related to standards (as well as to metrology) are still addressed by a common structure, the Bosnia and Herzegovina Institute for Standards, Metrology and Patents (BASMP). BASMP is a Partner Standardization Body in the European Committee for standardization (CEN) and an affiliate member of the European Committee for Electro-technical Standardization (CENELEC). BASMP is also a full member of the European Telecommunications Standards Institute (ETSI).

By the end of 2005, 6028 European Standards (EN) had been adopted as Bosnia and Herzegovina standards (BAS), a great majority of them by the declaration method. Out of the total number of adopted ENs, 1120 are those, which confer presumption of conformity to essential requirements of technical regulations.

The Institute for Standardization established 40 technical committees as well as 64 working groups with 724 hired experts to prepare BAS standards. The Director of the Institute for Standardization remains to be appointed.

Few developments have taken place in the field of metrology. The management positions (director and deputy director) of the Institute of metrology have been filled. The Institute is an associate member of the Organization for Legal Metrology (OIML) and, since January 2006, has been an associate member of EUROMET (European Collaboration in Measurement Standards). In May 2006 the Rulebook on the Internal Organization of the Institute for Metrology was adopted. The Commission for takeover and distribution of tasks, equipment, archives and pecuniary assets as well as civil servants and employees has begun its work. The legislation on metrology is not harmonized with EU standards, which require a separation between legal, scientific and industrial metrology. Moreover, the existing Entity Laws on metrology are not fully harmonized with the state level legislation. A study providing a basis for the preparation of a strategy for the development of metrology in Bosnia and Herzegovina has been completed.

After brief analyze we can conclude that before 2005, B&H established new organization of state institutions in the food chain and adopted completely new laws. New legislation more or less is transposed by EU acquis and it is good base for establishing efficient national food safety system. Unfortunately after 2005 activities are not continued, institutions was not fill vacancies and they was not continued work on drafting regulations needed for implementation of new laws. Without regulations that will regulate procedure and legal proceedings that laws couldn't be implement.

Because of that old legislation transposed from ex Yugoslavia is still in effect.

5.8. Other responsible institutions in charge of food safety are on the entity level:

Ministries of Agriculture - they are responsible for the phytosanitary, veterinary, and food processing area in their respective administrative part of the country. The Ministries of Agriculture are responsible for implementation of legislation in the above mention area in primary productions of agricultural products. Also they need to cooperate with state institutions in this area on the activities of preparation of regulations.

Ministries of Health - they are responsible for the sanitary (health) aspect in their respective administrative part of the country. Because of the fact that new regulations on the base of Food Law are not adapted yet the Ministries of Health are responsible for the implementation of the existing food laws, which exist at the entity levels (identical text of lows -ex Yugoslavia Law on safety of food and of objects of general use ("Official Gazette B&H" No 02/92/; 25/93) Institutes for Public Health are an integral parts of those ministries in Federations of Bosnia and Herzegovina and Republic of Srpska.

Ministries of Trade - they are responsible for the quality control area in their respective administrative part of the country. At the same time they are responsible for the quality control of food products in processing, marketing and trade food products.(In Federation B&H Law on Import-Export Quality Control (Official Gazette F B&H 21/97) and in RS B&H is Law on Quality Control of Agriculture Product and of Food in Foreign Trade Circulation ("Official Gazette SFRJ" No. 28/75, 70/78, 54/86, 30/91)

With adopted national regulations on the base of new national laws in the area of food safety and because that inspection services from entities ministries was transferred in the Entities Inspectorates the entities ministries above mentioned will lose importance in the field of food safety. The rule of these institutions will be in the coordination and cooperation with state institutions on the preparation of legislation and to supervise the implementation of legislation in this area. List of entities legislation is given in Annex 1.

5.9. INSTITUTE FOR PUBLIC HEALTH FB&H/CANTONAL INSTITUTES FOR PUBLIC HEALTH (IPHFBH)

Task and competencies:

Institute for Public Health FB&H (IPHFBH) is a health institution and its activities are aimed primarily at health maintenance and disease prevention.

The Low of Health Care regulates IPHFBH activity.

Under the Health Care Act, the public health activity of IPHFBH encompasses the monitoring and analysis of health care indicators; health education and health promotion; the epidemiology of infectious and the epidemiology of non-communicable diseases; ensuring the health safety of water, food and air; laboratory diagnosis; vaccinations and sanitation.

The indicators of its activity are:

To ensure the health safety of foods, drinking water and foodstuffs.

Traceability of samples from the point of reception for analysis to final expert assessment.

Creation of database on what to analyze and for which health safety parameters; entry of analytical data, automatic report writing

Statistical data analysis with access restrictions according to the level of user authority.

On-line linkage with other certified laboratories and collection of results of the analyses done under the Basic Program

Possibilities for analysis and search on the level of regions; statistical processing

Continuously updated monitoring

Its internal working structure is:

IPHFBH consists of 7 departments. In relation with food, foodstuff and drinking water control following services are available:

SANITARY CHEMISTRY

HYGIENE

MICROBIOLOGY

Human resources (number, qualification,)

NAME OF THE INSTITUTE	EMPLOYEES	UNIVERSITY DEGREE	TECHNICIANS	OTHER
Institute for Public Health FB&H	110	25	25	60
Institute for Public Health Una-Sana Canton	40	3	21	16
Institute for Public Health Tuzla Canton	36	11	12	13
Institute for Public Health Zenica-Doboj Canton	32	6	14	12
Institute for Public Health Bosnia-Podrinje Canton	7	2	3	2
Institute for Public Health Central Bosnia Canton	16	2	9	5
Institute for Public Health Herzeg -Bosnia Canton	1	1	0	0
Institute for Public Herzegovina –Neretva Canton	58	7	29	22
Institute for Public Health West-Herzegovina Canton	2	1	0	1
Institute for Public Health Sarajevo Canton	102	19	62	21

External working environment is

IFPHFBH is responsible to Federal Ministry of Health

Financial resources:

Partly financed by the Federal/Cantonal budget and partly from the laboratory services provided on market basis.

International technical assistants

a) Current

No information available

b)Planned

No information available

5.10. INSTITUTE FOR HEALTH CARE, REPUBLIC SRPSKA /Regional Institutes for Health Care (IHCRS)

Task and competencies:

Institute for Health Care, Republic of Srpska (IHCRS) is a health institution and its activity is aimed primarily at health maintenance and disease prevention.

The Low of Health Care regulates IHCRS activity.

Under the Health Care Act (Official Gazette Republic Srpska No 18/99), the public health activity of IHCRS encompasses the monitoring and analysis of health care indicators; health education and health promotion; the epidemiology of infectious and the epidemiology of non-communicable diseases; ensuring the health safety of water, food and air; laboratory diagnosis; vaccinations and sanitation.

The indicators of its activity are:

To ensure the health safety of food, drinking water and foodstuffs as well.

Traceability of samples from the point of reception for analysis to final expert assessment.

Creation of a database on what to analyze and for which health safety parameters; entry of analytical data, automatic report writing

Statistical data analysis with access restrictions according to the level of user authority.

On-line linkage with other certified laboratories and collection of results of the analyses done under the Basic Program

Possibilities for analysis and search on the level of regions; statistical processing

Continuously updated monitoring

Internal working environment is:

IHCRS consists of 7 Departments. In relation with food, foodstuff and drinking water control following services are available:

SANITARY CHEMISTRY

HYGIENE

MICROBIOLOGY

Human resources (number, qualification,)

SERVICE	**IHCRS**	**RI/ DOBOJ**	**RI/ ZVORNIK**	**RI/S: SARAJEVO**	**RI/ SRBINJE**	**RI/ TREBINJE**
SANITARY CHEMISTRY	8	4	4	4	3	2
HYGIENE	6	2	0	2	0	2
MICROBI-OLOGY	23	4	1	4	0	5
TOTAL:	**27**	**10**	**5**	**10**	**3**	**9**

Out of above-mentioned professionals 50 % are Specialist/University degree and 50 % are technicians (roughly).

External working environment is

IHCRS is responsible to Ministry of Health of Republic of Srpska

Financial resources:

Roughly 20% is financed from budget RS and roughly 80% from the laboratory services provided on market basis.

International technical assistants

a) Current

No information available

b)Planned

No information available

Entities Administrations for Inspection Work – on the base of Law on Inspections in Federation of Bosnia and Herzegovina and Law on Inspections in Republic of Srpska adopted in 2005 in Federation of Bosnia and Herzegovina and Republic of Srpska was in 2006 established Federal Administration for Inspections Work and Administration for Inspections Work of Republic of Srpska. Those institutions are responsible for sanitary control on the border and inside the entities, phytosanitary control on the border and inside the entities, veterinary control inside the entities and quality control on the border and inside the entities.

5.11. Federal Administration for Inspections Work

Task and competencies

On the base of Law on Inspections in Federation of Bosnia and Herzegovina (Official Gazette F B&H 69/05) was in 2006 established Federal Administration for Inspections Work. Although we are talking about new law, that law didn't recognize requirements of holistic approach in the field of food control.

The internal working structure is:

Federal administration was organized in 9 Sectors. For the area of food inspection relevant are

1. Market–Tourist Inspection /Market inspection in charge for quality control of food/

2. Sanitary–Health–Pharmaceutical Inspection /This inspection is in charge for sanitary control of food/

3. Agriculture inspection /This inspection is in charge for all aspect of phytosanitary control, fisheries, feed…./

4. Veterinary Inspection /This inspection is in charge for all aspect of veterinary control and control of feed/

Human resources

All Inspectors are relevant university degree.

1. Market–Tourist Inspection – 27 inspector (19 border inspectors and 8 internal)+cantons inspectors which are not direct responsible to this Inspection

2. Sanitary–Health–Pharmaceutical Inspection– 15 border sanitary inspectors+ 60 cantons inspectors which are not direct responsible to this Inspection

3. Agriculture inspection – 18 border inspectors (2+16 border inspectors) + 18 cantons inspectors which are not direct responsible to this Inspection

4. Veterinary inspection – total 52 inspectors in the territory of Federation of B&H

External working environment is:

Government of Federation of B&H

Financial resources:

Budget of Federation of B&H and donations.

International technical assistants

a) Current

b)Planned

WB project- Agriculture and Rural Development Project

5.12. Administration for Inspections Work of Republic of Srpska

Task and competencies

On the base of Law on Inspections in Republic of Srpska (Official Gazette RS/05) was in 2006 established Administration for Inspections Work of Republic of Srpska. Although we are talking about new law, that law didn't recognize requirements of holistic approach in the field of food control.

The internal working structure is:

Administration was organized in 9 Sectors. For the area of food inspection relevant are

1. Market–Tourist Inspection /Market inspection in charge for quality control of food/

2. Sanitary–Health–Pharmaceutical Inspection /This inspection is in charge for sanitary control of food/

3. Agriculture inspection /This inspection is in charge for all aspect of phytosanitary control, fisheries, feed…./

4. Veterinary Inspection /This inspection is in charge for all aspect of veterinary control and control of feed/

Human resources

All Inspectors are relevant university degree.

1. Market–Tourist Inspection – 26 border and internal inspectors + municipalities inspectors

2. Sanitary–Health–Pharmaceutical Inspection– 13 border sanitary inspectors + about 60 municipality sanitary inspectors which are not direct responsible to this Inspection

3. Agriculture inspection – 20 inspectors + municipality inspectors which are not direct responsible to this Inspection

4. Veterinary inspection – total 43 inspectors in the territory of Republic of Srpska

External working environment is:

Government of Republic of Srpska

Financial resources:

Budget of Republic of Srpska.

International technical assistance

a) Current

b)Planned

WB project- Agriculture and Rural Development Project

6. PRESENT SITUATION

As a mention before present system is still functioning on the basis of ex Yugoslavia legislation (before 1992.) that has been inherited, this was based on requirements of the Codex Alimentarius Commission, Good Manufacture Practices and Good Hygienic Practice.

For instance, the following regulations were taken over:

-Regulation on quality of meet and meet games

-Regulation on quality of meet products

-Regulation on quality of feed

-Regulation on quality of fruit and vegetables

-Regulations on quality of mineral waters

And more that 50 other regulations

To show how the food safety&quality control systems function in the FB&H according to existing regulations, we're providing the following example:

The regulation on quality of fruit and vegetables defines the minimum quality requirements for products intended for immediate consumption, and products after cocking/processing and packaging ("Official Gazette SFRJ" No 29/79, 53/87). The purpose of the regulation is to ensure the quality and hygiene level for mentioned products in production and distribution.

Besides the above-mentioned regulation, we also took over the Regulation on quality of processed fruit and vegetable products and processed mushrooms and pectin products, ("Official Gazette SFRJ" No 1/79, 20/82, 39/89, 36/91) which defines the minimum quality requirements for such products. The same regulation regulates quality of these products in transportation and distribution.

These previously mentioned regulations are followed by the Regulation on methodology for sampling and conducting of chemical and physical analysis to determine the quality of fruit and vegetable products ("Official Gazette SFRJ" No. 29/83)

This Regulation defines:

-Sampling methods

-Chemical and physical analysis to determine the quality of fruit and vegetable products.

Enforcement and implementation of the regulations is responsibility of the entities' inspections. However, these inspections were initially focused to control food products at the borders, and not on the local market.

The reason for that is unclear division of responsibilities between the Entities, Cantons and Municipalities. Therefore, mainly market inspectors at canton and municipal levels carried out the quality control, and sanitary inspectors carried out sanitary control. There are no obligations for cantons inspectors to report to the entities inspectors.

The quality control is based on documentation checking, checking of physical parameters and by sampling food and sending samples to authorized laboratories for quality analysis.

While regarding the above mentioned, we can conclude that existing food control systems are not providing a functional system at the national level. The existing food safety systems and the systems of quality control represent the sum and reflexion of the entity laws and regulations. Cooperation

and coordination between the institutions are limited and there is a lot of overlapping in the control system.

The existing ex Yugoslavia food laws are focused on the safety of food and objects of general use/hygiene control/, without defining the roles and responsibilities of different stakeholders working in the food safety and food quality sector, as well as in the veterinary, phytosanitary and quality control sector.

Having it in mind, it is not difficult to conclude that present system doesn't request accreditation bodies. The Entities Ministries of Trade authorize institutions that do quality control analysis. The legal base for this in Federation B&H is Law on Import-Export Quality Control (Official Gazette F B&H 21/97) and in RS B&H is Law on Quality Control of Agriculture Product and of Food in Foreign Trade Circulation ("Official Gazette SFRJ" No. 28/75, 70/78, 54/86, 30/91). Authorized institutions for quality control analysis are the most often institutes for public health or veterinary institutes. Analyses are being conducted at the end of production process or during export-import procedure. The identical situation is in the area of food safety where entities Ministries of Health authorize institutions that do safety control analysis.

The existing food laws do not require use of HACCP and Traceability systems. The authorities have not had legal bases for enforcement of this yet. The inspectors have not therefore adapted their functioning manner, where they inspect systems and results of the systems instead of performing spot checks mostly through testing and sanitary inspections.

Previously described circumstances show that the institutions in B&H involved in the food chain could provide limited information about international requirements for food safety systems. Because of that, the existing system couldn't provide efficient cooperation and coordination between international organizations in the area of food safety & quality from one side, and domestic producers and processors from the other side.

Because of above mention situation, B&H has not yet utilized the opportunity to access technical assistance under the WTO Agreements SPS Agreement (Article 9) and TBT Agreement (Article 11) specifically refer to the need to provide technical assistance to developing countries.

Different donor agencies provided limited technical assistance in the area of food safety but it hasn't been coordinated between them.

7. FOOD SAFETY SITUATION WITH REGARDS TO EU REQUIREMENTS

From the previous mentioned is clear that actual situation cannot fulfill EU requirements for consumer protection and export of food.

Hawing in mined that B&H from 2001 have had preferential status for EU market, what was also one of the reasons why B&H significantly intensified activities in this area during 2003 and 2004, it is very hard to find answers why activities on the establishing state institutions and adopting regulations are not continue on the appropriate way after 2005?

For instance, the Food Law that was adapted on the beginning of November 2004 regulated the legal obligation for adopting secondary legislation in the following 18 months. The bases for Food Law are SPS and TBT requirements as well as EC Regulation 178/2002, the legal obligations for

produces, beside existing principles of Good Manufacture Practices and Good Hygienic Practice, will be establishing of the HACCP and Traceability. In that low had laying down the principles for EC Regulations 882/2004, 852/2004, 854/2004 also like for Directive 2004/41/EC and amending Council Directives 89/662/EEC and 92/118/EEC and Council Decision 95/408/EC, 21 April 2004.

Besides requirements of the approximation of legislation and properly structured and trained administrations on the all levels, in this moment are no fulfilled other principal for export on the EU single market like:

- appropriate structures and inspection arrangements
- a comprehensive residue control program
- zoonoses control program;
- surveillance and monitoring programs;
- satisfactory laboratory testing arrangements
- an internal computerized system linking food safety authorities inside the country …

Hawing in mind requirements above mention and weaknesses of system that are demonstrate in:

- absence of clearly defined policy and national food safety strategy;
- slow and inefficient establishment of institutions
- insufficient level of institutional communication and cooperation with reference to information flow and legislative planning
- non-compliance with deadlines for implementation of food safety regulations;
- some institutions within the food safety system do not have adequate level of knowledge on EU regulations, and foreign language proficiency is not adequate;
- inspectors are not trained for official control of implementation of GMP, HACCP and traceability;
- existing laboratories in the food sector do no fulfill accreditation requirements;
- in not real to expect that efficient National food safety system could be established in the short time.

At the same time, only the small numbers export-oriented producers and processors realized and recognized international trends in the area of food safety. They accepted the fact that they are responsible for the food safety and quality and they started with certification from the competent

certification bodies out of B&H. Others will probably start with that process when it will be legal obligation.

INSTEAD OF CONCLUSIONS

The purpose of the previous report was to present in short current situation and status of the sector of the food safety.

This is an extremely complex sector that should attract much more attention in the future.

An efficient National Food Safety System must be established as soon as possible. For final establishment of the effective and transparent system in this field it will be very important beside full political support, to provide coordination and cooperation with domestic institutions as well as to provide coordination of expecting technical assistants

It is necessary to ensure support from all stakeholders; primarily consumers, producers and processors, and that must be done in a transparent way by creation and adoption of a regulation for new legislation and national strategy for food safety and control.

Creation and adoption regulation on the bases of adopted legislation and a national strategy for food safety and control means a full political support that we were lacking so far.

Taking into account limited human and equipment resources in the Government sector, it was impossible to undertake a more comprehensive education of consumers, producers and processors in this field and there was a total lack of support from NGOs and lack of organized donors' approach.

Therefore, in the following period of time it is necessary to ensure not just strengthening of mentioned institutions, but also a strong support and commitment from key players, and coordination and best use of foreign donors' assistance. Of course, special efforts should be carried out to educate consumers, which will be the state counterparts in establishment of an efficient system of food safety and control. Without their strong commitment and work on this issue, there will be no efficient food safety and quality control system.

Hawing in mind previous mention USAID technical support in whichever field mention before will be very welcome. This special in this moment when EC, Sida and WB are start to coordinate technical assistant in the area of agriculture and area of food safety for the next period. In the coordination and cooperation with that institutions and with coordination from the MoFTER side, that support will have full sense.

Appendices

Appendix 1

Agricultural laws in RS

Law on Republic Srpska ministries "Official Gazette RS" No. 70/02

- The Veterinary Law on Animal Health Protection and Veterinary Activity "Official Gazette RS No.11/95; 10/97; 52/01),

-Veterinary Law of Bosnia and Herzegovina "Official Gazette BiH" No. 34/02"

- Law on Producing and Circulation of Veterinary Medicinal "Official Gazette RS" No. 14/94

- Law on Agriculture Seed and Seedling Material "Official Gazette RS 13/97

- Law on Plant Protection "Official Gazette RS 13/97

- Law on Plant Health Protection "Official Gazette B&H" No. 23/03

- Law on Tobacco "Official Gazette RS" No. 4/97

- Law on Fishing "Official Gazette RS" No. 4/02

- Law on Wine and Brandy "Official Gazette RS" No. 3/97

- Numerous regulations (more than 200 written documents)

Agricultural laws in FBiH

Law on Federal Ministries and the Other Federal Bodies "Official Gazette FB&H" No. 58/02

- The Veterinary Law of FB&H "Official Gazette FB&H" No. 46/00,

- Veterinary Law of Bosnia and Herzegovina "Official Gazette B&H" No. 34/02"

- Law on Protection of Animals from Contagious Diseases that endanger whole Country "Official Gazette of the SFRY No 43/86; 53/91

- Law on Health Care of Animals "Official Gazette SR B&H 14/78

- Law on Health Appropriateness of Food and of Objects for General Use ("Official Gazette SRB&H" No. 72/91)

- Law on Health Supervision of Food ("Official Gazette SRB&H" No. 43/86 and 18/90)

- Law on Agriculture Seed and Seedling Material "Official Gazette FB&H" No. 55/01

- Law on Recognition and protection right of variety of agricultural and forestry plant "Official Gazette FB&H" No. 31/01

- Law on Plant Disease Protection "Official Gazette SFRJ" No. 74/89

- Law on Plant Health Protection from Deceases and Harmful Organisms "Official Gazette SR B&H" No. 21/77; 39/84; 12/87; 4/92

- Law on Agriculture Land "Official Gazette FB&H" No. 2/98

- Numerous regulations (more than 150 written documents)

Law in the area of quality control in RS

Law on Quality Control of Agriculture Product and of Food in Foreign Trade Circulation ("Official Gazette SFRJ" No. 28/75, 70/78, 54/86, 30/91)

Law in the area of quality control in FBH

Law on Import-Export Quality Control ("Official Gazette F B&H 21/97")

Appendix 2

List of labs

- Veterinarian Faculty in Sarajevo
- Veterinarian Institute Vaso Butozan in Banja Luka
- Veterinarian Institute in Mostar
- Veterinarian Institute in Tuzla
- Canton Sarajevo Veterinarian Station (Institute)
- Veterinarian Institute in Bijeljina
- Veterinarian Institute in Zenica
- Institute for Public Health FB&H-Mostar
- Institute for Public Health Una-Sana Canton
- Institute for Public Health Tuzla Canton

- Institute for Public Health Zenica-Doboj Canton
- Institute for Public Health Bosnia-Podrinje Canton
- Institute for Public Health Central Bosnia Canton
- Institute for Public Health Herzeg -Bosnia Canton
- Institute for Public Health Herzegovina –Neretva Canton
- Institute for Public Health West-Herzegovina Canton
- Institute for Public Health Sarajevo Canton
- Institute for Health Care of RS -Banja Luka
- Institute for Health Care of RS - Zvornik
- Institute for Health Care of RS – East Sarajevo
- Institute for Health Care of RS – Srbinje
- Institute for Health Care of RS - Trebinje
- Agricultural Institute Sarajevo
- Agricultural Faculty Sarajevo
- Agricultural Institute Mostar
- Agricultural Institute Banja Luka
- Agricultural Institute Bijeljina

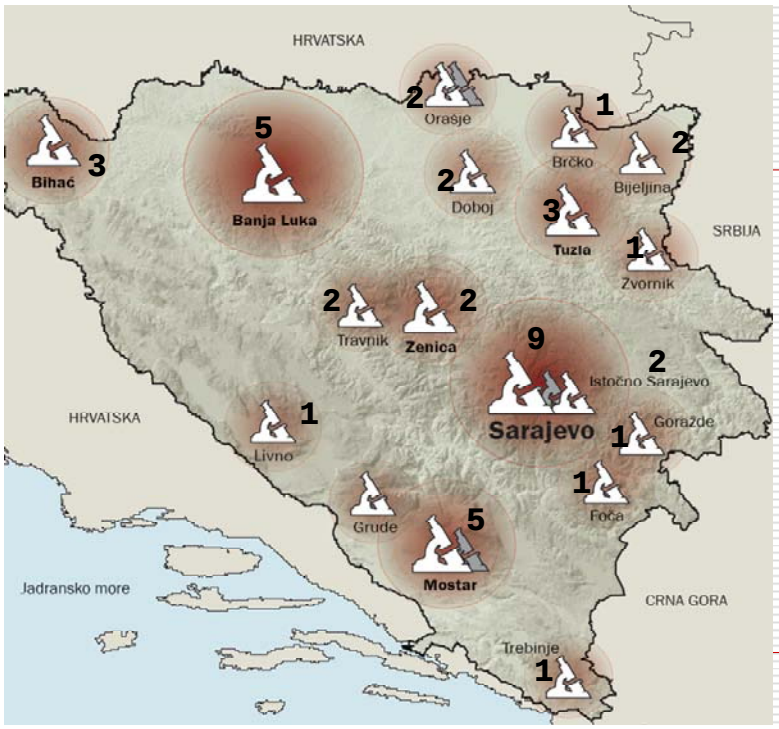
ANNEX 11: LIST OF LABS RELEVANT TO FOOD SAFETY IN BIH

LIST OF LABORATORIES BIH

Ime/Name	Vlasnistvo/Ownership	Lokacija/Location	Adresa/Address	Telefon/Telephone
Veterinarski institut 'Dr. Vaso Butozan'	Javna/public	Banja Luka	Branka Radicevica 18	(051) 229-210
Institut za zastitu zdravlja RS	Javna/public	Banja Luka	Jovana Ducica 1	(051) 216-509
Poljoprivredni fakultet	Javna/public	Banja Luka	Stepe Stepanovica 75	(051) 312-390
Poljoprivredni institut	Javna/public	Banja Luka	Knjaza Milosa	(051) 303-112
Tehnoloski fakultet	Javna/public	Banja Luka	Ul.Vojvode Stepe Stepanovica 73	(051) 464-550
Biotehnicki fakultet	Javna/public	Bihac		
Zavod za javno zdravstvo unsko-sanskog kantona	Javna/public	Bihac		
Veterinarski zavod	Javna/public	Bijeljina	Racanska 56	(055) 221-480
Odjel za primarnu i zdravstvenu zastitu	Javna/public	Brcko		
Regionalna laboratorija zavoda za zastitu zdravlja RS	Javna/public	Foca		
Zavod za javno zdravstvo bosansko-podrinjskog kantona	Javna/public	Gorazde		
Zavod za javno zdravstvo zapadno-hercegovackog kantona	Javna/public	Grude	Mate Bobana bb	(039) 661 702
Regionalna laboratorija Zavoda za zastitu zdravlja RS	Javna/public	Istocno Sarajevo		
Zavod za javno zdravstvo herceg-bosanskog kantona	Javna/public	Livno	Stjepana Radića bb	(034) 200 563
Zavod za javno zdravstvo hecegovacko-neretvanskog kantona	Javna/public	Mostar	Bijeli Brijeg bb	(036) 342 841
Agronomski Institut Sveucilista u Mostaru	Javna/public	Mostar	Nadbiskupa Čule 10	(036) 314 393
Veterinarski zavod	Javna/public	Mostar	Rodoč bb	(036) 350-209
Zavod za zdravstvenu zastitu HNK	Javna/public	Mostar	Maršala Tita 53	(036) 551 477
Herkon d.o.o.	Privatna/private	Mostar	Nadbiskupa Čule 10	(036) 324 618
Zavod za javno zdravstvo Posavskog Kantona	Javna/public	Orasje		
Agrokontrola d.o.o.	Privatna/private	Orasje		
Poljoprivrendi Institut	Javna/public	Sarajevo	Butmirska Cesta 40	(033) 637-601
Zavod za javno zdravstvo FBiH	Javna/public	Sarajevo		
Zavod za javno zdravstvo Kantona Sarajevo	Javna/public	Sarajevo		
Poljoprivrendi fakultet	Javna/public	Sarajevo	Zmaja od Bosne bb	(033) 653-033
Kantonalna veterinaraska stanica	Javna/public	Sarajevo		
veterinarski fakultet	Javna/public	Sarajevo		
Euro Inspekt d.o.o. (P.J. Real Inspekt)	Privatna/private	Sarajevo		
Zavod za javno zdravstvo srednje-bosanskog kantona	Javna/public	Travnik		
Regionalna laboratorija zavoda za zastitu zdravlja RS	Javna/public	Trebinje	Dalmatinska bb	(059) 240 012
Zavod za javno zdravstvo tuzlanskog kantona	Javna/public	Tuzla		
Veterinarski zavod	Javna/public	Tuzla	Slavka Micica 28	(035) 252-343

Ime/Name	Vlasnistvo/Ownership	Lokacija/Location	Adresa/Address	Telefon/Telephone
Veterinarski zavod	Javna/public	Zenica		(032) 285-781
Zavod za javno zdravstvo zenicko-dobojskog kantona	Javna/public	Zenica		
Regionalna laboratorija zavoda za zastitu zdravlja RS	Javna/public	Zvornik		

ANNEX 12: GEOGRAPHICAL DISTRIBUTION OF FOOD TESTING LABS IN BIH



Geographical preview of food testing laboratories in B&H

Notes:

-All data are collected by visits of laboratories or were published on the lab. official web sites

-Corrections are possible on the base of contacts in future

ANNEX 13: FOOD PRODUCTION CAPACITY AND HACCP IMPLEMENTATION IN THE FEDERATION OF BIH

A) Slaughterhouses

- Cattle slaughterhouses – 10 objects for slaughtering with average capacity of slaughtering and processing 752 head of cattle per day.
- Poultry slaughtering – 2 objects with average capacity of 40 000 head of poultry per hour. (**Note**: 1 object has a HACCP system in place – implementation status is *questionable*).

B) Dairy industry

- 36 objects for milk processing with a capacity of 100 000 liters of processed milk per day; 1 804 tons of milk products (cheese) per year; and 60 tons of other milk products per day. (**Note**: 1 object has HACCP in place).

C) Fish farm

- 7 objects with total production of 1 778 000 tons per year.

D) Meat production and processing

- 9 objects. No data on capacity. (**Note**: 2 objects have HACCP in place).

E) Eggs production

- 3 objects with total capacity of 288 500 eggs per week.

(Source: Federal Ministry of Agriculture, Forestry and Water Supply – 11. March 2006)

F) Other food sectors

FOOD SECTOR	NUMBER OF OBJECTS	CAPACITY	UNIT OF MEASURE	PRODUCTION IN 2004	PRODUCTION IN 2005
Mill industry	25	367 500	Tons	53 681	100 989
Fruits and vegetables processing	5	36 000	Tons	8 136	8 060
Biscuits and cakes production	3	15 400	Tons	6 417	7 977
Production of chocolate and similar products	4	15 200	Tons	1 021	841
Beer production	4	1 900 000	hectoliters	643 000	662 000
Vine production	33	265 000	hectoliters	67 221	49 848
Mineral water and non alcoholic beverages	86	500 000	000 liters	142 181	902 842

Source: *Federal Ministry of Agriculture, Forestry and Water Supply*, based on *Federal Agency for Statistics data (23.03.2006)*

***Note**: Similar data from (Republic of Srpska are not published yet*

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